DOCUMENT RESUME

ED 271 128 JC 860 011

AUTHOR Knudstrup, Katherine; And Others

TITLE Developmental Disabilities: A Summary of Major Classifications and Glossary of Terms. Parent Awareness Program, 1982-1983. Revised.

INSTITUTION Delta Coll., University Center, MI. Allied Health-Community Affairs.
SPONS AGENCY Michigan State Dept. of Mental Health, Lansing.
PUB DATE 83
NOTE 123p.; For other manuals in this series, see ED 266 828-832.
PUB TYPE Guides - Classroom Use - Guides (For Teachers) (052) -- Guides - Non-Classroom Use (055)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS Adult Education; *Autism; *Cerebral Palsy; Child Development; Definitions; Developmental Disabilities; *Epilepsy; Etiology; *Learning Disabilities; *Mental Retardation; *Parent Education

ABSTRACT

Designed for use in adult education courses for parents of developmentally disabled children, this manual provides basic information about major categories of disabilities and a glossary of commonly encountered terms. After an introductory overview, the manual provides information about the characteristics and etiology of five disabling conditions: (1) mental retardation, including a special section on Down's Syndrome; (2) cerebral palsy, with sections focusing on spasticity, athetosis, ataxia, rigidity, tremor, and mixed types of cerebral palsy; (3) epilepsy, including information on types and manifestations of seizures, drug therapy, and first aid; (4) autism; and (5) learning disabilities. Appendices provide essays on treatments for epilepsy and theories on causes of autism. An extensive glossary for developmental disabilities, includes definitions of commonly used general special education terms, professional jargon and difficult to understand statements, frequently used abbreviations, and categorical areas of impairment. A list of journals available to parents, a bibliography, and a key to clinical abbreviations conclude the manual. (AYC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED271128

DELTA COLLEGE

PARENT AWARENESS

A FREE PROGRAM FOR FAMILIES
OF THE DEVELOPMENTALLY DISABLED

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

R. R. ZIMMERMANN

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☒ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

For Additional Information
Call: Delta College
University Center, MI
(517) 686-9539
And Ask About The
"Parent Awareness Program"

JC 860 011

DEVELOPMENTAL DISABILITIES

A Summary of Major Classifications and Glossary of Terms

PARENT AWARENESS PROGRAM

1982 - 1983

Materials By:

Katherine Knudstrup
Robert R. Zimmermann

Revision-Update 1983 By:

Marcia Nunn
Julie Vander Mel-Tack

Clerical Staff:

Deboria Buck
Emily Heil
Nancy Schatzer

Program for Parents of Developmentally
Disabled Children, Adolescents, and Adults

DELTA COLLEGE

The production of this manual was supported by Grants #81040, #81630, and #82040 from the Michigan Department of Mental Health as the Administering Agency for the Michigan State Planning Council for Developmental Disabilities awarded pursuant to P.L. 95-602, as amended, the Developmental Disabilities Assistance and Bill of Rights Act. However, its contents are solely the responsibility of grantee/contractor and are in no way the responsibility of the Michigan State Planning Council for Developmental Disabilities or the Michigan Department of Mental Health.

Acknowledgements and Credits

The method used to bring this course to the parents is distinctly "Adult Education" oriented. We have assumed that the students in this course were volunteer adult learners who have special attitudes toward education and unique goals and expectations as learners. We felt that parents attended this program in order to become more effective persons in managing their lives and dealing with the problems associated with raising a developmentally disabled child. With this in mind, we selected topics and material that were of primary interest to the parents. As the parents gained knowledge and experience, we continued to adjust the emphasis of the course to meet their new interests and expectations.

The material we have gathered is not "the final scientific word." Some of the methods and activities described may not have "statistically significant effects for groups of disabled children." Our criteria for the inclusion of material was: Did parents find procedures helpful? Were they able to record advances or improvements in their child's performance? Did their quality of life with their disabled child improve?

The information for the Survey of Developmental Disabilities has come from a variety of commercial sources and from noncommercial publications related to developmental disabilities. We have attempted to bring to the parents an accurate and up-to-date account of the status of developmental disabilities.

The following texts were used as primary sources:

Topic	Source
By parents of disabled children	Heartaches and Handicaps: Gail Stigen; Scientific and Behavior Books, Inc.; Palo Alto, California, 1979.
	A Difference in the Family: Helen Featherstone; Basic Books, Inc. Publishers; New York, 1980.
Behavior Management	Working with Parents of Handicapped Children: W. Heward; J. Dardig; A. Rossett; Charles E. Merrill Publishing Company; Ohio, 1979.
Mental Retardation	Mental Retardation: P. Chinn; C. Drew; and D. Logan; C.V. Mosby; St. Louis, 1979.
Autism	Reaching the Autistic Child: M. Kozloff; Research Press; Champaign, Illinois, 1973.

Epilepsy	Epilepsy: A. Middleton; A. Attwell; and G. Walsh; Little, Brown, and Co.; Boston, 1981.
Cerebral Palsy	Individuals with Physical Disabilities: Gary A. Best; C.V. Mosby; St. Louis, 1978.
Learning Disabilities	Learning Disabilities, Concepts and Characteristics: G. Wallace; and J. McLoughin; Charles E. Merrill Publishing Company; Columbus, 1978.

TABLE OF CONTENTS

Introduction 1

Mental Retardation 4

Cerebral Palsy 16

Epilepsy 26

Autism 40

Learning Disabilities 44

A Glossary for Developmental Disabilities 53

Definitions of commonly used general special education terms 55

Professional jargon and cryptic statements 67

Professional jargon and cryptic statements (By category of impairment) 77

Frequently used abbreviations 88

Categorical areas of impairment and definitions 90

Some journals available to parents 95

Bibliography 97

Clinical Abbreviations 99

DEVELOPMENTAL DISABILITIES

Introduction

The use of the term "Developmental Disabilities" to describe the class of disabling conditions that originate early in the life of the individual began in the late 1960's and early 1970's. Prior to this attempt to bring a wide range of early childhood disabilities under one umbrella of classification, the different types of defects of development were treated as unrelated. The methods of identification and classification were usually rooted in medical vocabulary, and the system usually focused on the source or etiology of the disability rather than a description of the unique characteristics of the individual. There are a significant number of professionals that continue to use much of this older language. Therefore, it is important for parents of children with developmental disabilities to become familiar with the language and vocabulary of their child's disability from both a historical as well as a contemporary viewpoint.

First of all, what is a developmental disability? Developmental disability has been defined by the Federal government and by the State of Michigan as a severe, chronic condition (continuing condition) which occurs before the age of 22 as a result of a mental or physical impairment. The disability is likely to continue indefinitely, substantially limiting the individual's ability to perform basic life activities. At present the major developmental disabilities are (in alphabetical order): 1) autism, 2) cerebral palsy, 3) epilepsy, and 4) mental retardation.

We might add to this list a fifth category--5) severe learning disabilities. This is recognized as a separate category, and we will have a special section on this topic. However, in the realities of the system, most children who are labeled as having a "severe learning disability" will often be classified at a high level form of mental retardation or will carry the label of "Emotionally Impaired." Parents often become disturbed by the maze of terms that they first hear upon discovering that their child is disabled. The parents see these coldly stated descriptions and theories of their child's disabilities as bearing little or no human application. However, classification is important in the overall system to assure adequate availability of medical, social, and educational services.

Let's look in a little more detail at the term developmental disabilities: they are physical or mental impairments which are severe and continuing; that is, they are not temporary; they are chronic. The disability has to have certain other characteristics: a) it must be attributable to a mental or physical impairment or a combination of these two; b) it must be manifested before the person attains the age twenty-two; c) it is likely to persist indefinitely; that is, there is very little chance of remission or substantial change; d) it results in a substantial functional limitation in three or more of the following areas of major life activity: 1) self-care, 2) receptive and expressive language, 3) learning, 4) mobility, 5) self-direction, 6) capacity for independent living, and 7) economic efficiency. Furthermore, e) the limitation or disability reflects the person's need for a combination and sequence of special care or treatment or other services which are of lifelong or extended direction and must be <u>individually planned and coordinated</u>.

To be legally classified as having a developmental disability, a child would have to have limited functioning (or potential limited functioning) in any three of the seven major life activities. It is this classification that makes the child eligible for special educational, medical, and social services. The parents are eligible to receive aid in planning and coordinating an individualized program for their child.

The concept of developmental disability helps us focus our attention on the fact that although the child may be disabled, he or she is capable of changing or will change over the course of time. The concept also implies that this child will probably have a developmental history that is not the same as that of a child who does not have that particular disability and that the child will need special assistance at points through the stages of development.

In the next section we will look at some of the specific disabilities, and we will attempt to describe the characteristics as well as the etiology (the causes or history) of the particular syndrome. It is important to remember that the disabilities that we will be discussing (mental retardation, cerebral palsy, epilepsy, autism, and learning disabilities) are not disease entities. They are conditions characterized by a collection or group of symptoms resulting from many different causes--biological, psychological, educational, cultural, and economic--which result in impaired intellectual or adaptive behavior.

The disabilities we will discuss usually originate before, during, or shortly after childbirth and will probably continue in some form over a lifetime. Two or more of these disabilities may co-exist in one person or a developmentally disabled person may have blindness

and deafness, and thereby be multiply handicapped. Persons having these disabilities often have need for residential care, special education, health, vocational training, employment, recreation, and guardianship or protective services. This is what this course is all about.

Mental Retardation

Mental retardation is probably the largest classification in terms of the numbers of children afflicted and the number of different syndromes that we will be describing. There are many sub-classes within this category. We will look at both the descriptive and classical definitions. As Stigen points out, "mental retardation is not only the largest single category of handicapped in the world, but it probably also has the poorest image and the worst press."

A reasonably accepted definition of mental retardation is given by the American Association of Mental Deficiencies: "mental retardation refers to significantly sub-average general intelligent functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period." This definition has two major aspects to it. One is the reference to general intellectual functioning. This usually refers to the child's performance on a traditional standardized test of intelligence. The second is that the individual must also demonstrate deficits in adaptive behavior characteristic of the age of the child. Thus, a child may have low test scores on a traditional IQ test but may, for all practical purposes, show effective adaptive behavior for his or her particular age. This child would not be classified as mentally retarded. The other side

of the coin, a child may have normal scores on a traditional IQ test but may be far behind in his or her adaptive behavior for the particular age group. This child, too, would not be classified as mentally retarded. Table I shows the test scores on traditional tests, (the WISC-R form and the Binet and Cattell) and the levels of retardation that are classified by the AAMD and the new classifications developed through the Office of Education. It is important to become familiar with both of these classifications. When you work with the school system, they will usually talk in terms of educable, trainable, and severe mental impairment while if you are dealing with medical personnel, they may use terms such as mild, moderate, severe, and profoundly retarded. Examples of the adaptive behaviors in relationship to the age level of the child are shown in Table II.

TABLE I

Classification By IQ Scores*

IQ Tests and Scores		Levels of Retardation	
WISC-R	Binet and Cattell	AAMD	Educational
55 to 69	52 to 68	Mild	Educable
40 to 54	36 to 51	Moderate	Trainable
25 to 39	20 to 35	Severe	Severe
24 and below	19 and below	Profound	

*Freddie W. Litton, Ed.D., Education of the Trainable Mentally Retarded, (St. Louis, Missouri: The C.V. Mosby Company, 1978), p. 10.

Table II

ADAPTIVE BEHAVIOR LEVELS AS A FUNCTION OF AGE

	PRESCHOOL (0-5)	SCHOOL AGE (6-20)	ADULT (21+)
Level I (mild or EMR)	Can develop social and communication skills; minimal retardation in sensorimotor areas; often not distinguished from normal until older.	Can learn academic skills up to approximately sixth grade level by late teens; can be guided toward social conformity.	Can usually achieve social and vocational skills adequate to minimum self-support but may need guidance and assistance when under unusual social or economic stress.
Level II (moderate or TMR)	Can talk or learn to communicate; poor social awareness; fair motor development; profits from training in self-help; can be managed with moderate supervision.	Can profit from training in social and occupational skills; unlikely to progress beyond second grade level in academic subjects; may learn to travel alone in familiar places.	May achieve self-maintenance in unskilled or semiskilled work under sheltered conditions; needs supervision and guidance when under mild social or economic stress.
Level III (severe or SMR)	Poor motor development; speech is minimal; generally unable to profit from training in self-help; little or no communication skills.	Can talk or learn to communicate; can be trained in elemental health habits; profits from systematic habit training.	May contribute partially to self-maintenance under complete supervision; can develop self-protection skills to a minimal useful level in controlled environment.
Level IV (profound or custodial)	Gross retardation; minimal capacity for functioning in sensorimotor areas; needs nursing care.	Some motor development present; may respond to minimal or limited training in self-help.	Some motor and speech development; may achieve very limited self-care; needs nursing care.

From The Problem of Mental Retardation, Department of Health, Education, and Welfare, Office of the Secretary, Washington, D.C., 1975, U.S. Government Printing Office, pp. 8-9.

Most classification systems are usually designed for the convenience of the institution or the professional who has to treat or provide services for the child. The classification provides very little information for the parent. The parents may be able to grasp some idea of the type of treatment that is in store for their child, but the system rarely provides enlightenment for the parents. Many parents feel that the system does not take into account the unique characteristics or qualities of their child. The classification systems are probably one of the primary points of contention between parents and the institutional systems that are required to design individual, educational, and treatment programs for their child.

The attempt to describe specific causes of mental retardation is almost as controversial as the classification systems. The fact that there are so many different types of mental retardation suggests that the causes are many. The underlying disorders or events that are responsible for mental retardation are numerous and may exist singularly or in various combinations. They may be the result of events that occurred before conception, congenital (hereditary), before birth (prenatal), during birth (perinatal), or after birth (postnatal).

It is estimated that approximately 3% of the population of the United States today would meet the legal criteria for classification as mentally retarded. In terms of numbers, there are approximately six million retarded individuals in the United States. The vast majority, probably around 80%, of retarded individuals would fall into the mild or educable level of classification. A recent survey revealed that of the total number of mentally retarded children and adults

identified, 76.7% were classified as EMR, 20% as TMR, and 3.3% as SMR.* (The current classification systems in use in Michigan use the symbols EMI - educable mentally impaired, TMI - trainable mentally impaired, and SMI - severely mentally impaired.) *See Table III.

TABLE III

Incidence of Mental Retardation by Level*[1]

Level	Total incidence (%)	Retarded (%)	Estimated number
EMR	2.6	76.7	5,460,000
TMR	0.3	20.0	630,000
SMR	0.1	3.3	210,000
Total	3.0	100.0	6,300,000

*Based on a population of 210 million.

[1]Freddie W. Litton, Ed.D., Education of the Trainable Mentally Retarded, (St. Louis, Missouri: The C.V. Mosby Company, 1978), p. 12.

In relation to the total population of the United States, less than one-tenth of one percent of the identified retarded persons are classified as severely mentally impaired. Thus there would be approximately 210,000 severely mentally impaired individuals in the United States today. It is interesting to note that cross-cultural studies reveal that the rate of appearance of severe mental impairment occurs fairly constantly across a wide range of different human populations and that severe mental impairment occurs in isolation. There are usually physical, sensory, metabolic, and biochemical anomalies

associated with the severe mental impairment. In addition, the rate of appearance of the severely or profoundly retarded appears to be fairly constant across socio-economic levels.

Contrariwise, the incidence of mild retardation or EMI in the population is highly correlated with socio-economic status. The lower the socio-economic class, the higher the incidence of EMI; and the higher the socio-economic class, the lower the incidence of mild forms of retardation. One study completed in England in the late 1960's revealed no reported incidence of EMI in a large sample of upper-class British families.

TABLE IV

The AAMD classification system established the following ten etiological classifications:

(1) Infections and Intoxication
(2) Trauma or Physical Agent
(3) Metabolism or Nutrition
(4) Gross Brain Disease (Postnatal)
(5) Prenatal Influence
(6) Chromosomal Abnormality
(7) Gestational Disorders
(8) Following Psychiatric Disorders
(9) Environmental Influences
(10) Other Conditions

Each classification may be linked with any of the following supplementary conditions:

(1) Genetic Component
(2) Secondary Cranial Anomaly
(3) Impairment of Special Senses
(4) Disorders of Perception and Expression
(5) Convulsive Disorder
(6) Psychiatric Impairment
(7) Motor Dysfunction

And, in addition, will have a behavioral classification based on measured intelligence (IQ) and adaptive behavior (Grossman, 1973).

The classification system developed by the American Association of Mental Deficiency focuses on the etiology (causes, origins, or reasons) for the disability and is summarized in Table IV. One of the limiting factors linked to this system of classification is that it may identify or suggest the source of the abnormality, but it does not provide any information concerning the quality or quantity of the disability. In addition, this form of classification often influences our mind-set toward the child. It is a label that often denotes a fixed or diseased type of entity that makes the child appear qualitatively different from all other children. It tends to focus our attention on variables over which we no longer have control (historical, genetic, etc.) rather than on the factors that are influencing the child's performance at the moment.

In his cross-cultural survey of the incidence of mental retardation, Tizard reported that one of the characteristics that constantly distinguished the mild (EMI) retardate from all of the other classes was that the latter also suffered from the presence of muscle, biochemical, sensory, or neural defects. In other words, it was rare to find a child that would be classified as a TMI or SMI and find only limited intellectual and adaptive performance. These children were characterized by the presence of sensory impairment, motor impairment, and other types of metabolic dysfunctions. For example, in describing the physical characteristics of the Trainable Mentally Impaired group the authors included the following:

> The individuals are slightly below normal in height, a tendency of many to be overweight, significantly more handicaps in vision and hearing, and a greater incidence of physical and multiple handicapping conditions. A high frequency of the individuals are easily fatigued and have an inability to maintain an adequate posture.

Within the TMR (TMI) classification there appears to be a significant relationship between the level of IQ and the physical fitness of the child. That is, those in the TMI group with the higher IQ score appear to be better physically fit. In the normal and moderately retarded groups (EMI) this relationship does not appear.

Finally, it was reported that the traditional perceptual motor skills and reflexes that normal children develop are often absent or poorly developed in the TMI individual even as they approach young adulthood. There is a lag in motor development. Motor performance abilities are usually two to five years behind the normal population. Although the organization of the motor performance of the handicapped child appears to be similar to the normal child (i.e., similar sequencing), the appearance of mature organization is significantly delayed. Thus the attainment of specific motor abilities may follow similar developmental curves for both the normal and retarded individuals. The retarded groups display these abilities at a much later chronological age.

A careful observer of children and of the type of treatment that has been available to handicapped children in the past would not accept this list of characteristics as factors that are inevitably linked to the developmental disability. Short stature and body weight have potential environmental determinants. Minor sensory deficits can

become major handicaps if not corrected during the early stages of development. This is not to say that the life of the TMI child is not complicated by the pressure of physical and sensory limitations; however, we should not ascribe these deficits as inevitable or unavoidable aspects of the TMI condition.

Down's Syndrome: A Special Case of Mental Impairment

Down's Syndrome is one of a number of mental retardation diagnoses that are characterized by a distinguishing physical form. Children with Down's Syndrome look more like each other than they do to their siblings or other members of their families. In the traditional nomenclature, individuals with this disability were described as having "Mongolism" and were called mongoloids. Webster's unabridged dictionary describes Down's Syndrome in the following manner: "a congenital idiocy of unknown ultimate cause in which a child is born with slanting eyes, a broad, short skull, and broad hands or short fingers." Stigen suggests that this definition should put legions of parents into irreversible depression. This is a classical example of how definitions and traditional interpretations of mental and physical impairments can stereotype and stigmatize a group of individuals.

Down's Syndrome has been traced to a number of very specific chromosomal aberrations. We do not know how and why this chromosomal abberation affects the mental development of the child, but researchers have identified three specific types of chromosome abnormalities that are associated with Down's Syndrome.

The more prevalent is called the trisomy in which there is an extra chromosome in the 21st chromosome pair; this type is also

described as an extra chromosome in the G group. In this particular form of Down's Syndrome there is a definite correlation between maternal age and the appearance of the syndrome. Older women (30 and up) are much more likely to give birth to a child with Down's Syndrome than women under 30. Table V summarizes the frequency of DS births as a function of age.

TABLE V

Approximate Frequency of Down's Syndrome Births According to Maternal Age*

Maternal age	Frequency of occurrence
< 30	1 in 1,500
30 to 34	1 in 750
35 to 39	1 in 280
40 to 44	1 in 130
> 45	1 in 65

*Data from Mikkelsen, M., and Stene, J.: Genetic Counseling in Down's Syndrome, Hum. Hered. 20:457, 1970.

A second type of chromosomal aberration that results in Down's Syndrome is that phenomenon called translocation. This occurs in 90% of the effected infants born to mothers under the age of 30, and 2% of the effected infants born to mothers over the age of 30. Basically what happens in this second type is that one chromosome from one pair in a group called the G group becomes attached to one of the chromosomes in the fifteenth pair or the D group. This causes an extra long

chromosome. This type of chromosomal aberration may be inherited. One of the parents is the carrier of the condition. Such an instance can be detected through genetic counseling of each parent.

The third condition resulting in Down's Syndrome is called mosaicism. In this case the cells of the individual's body are identified as mixed. Some of the cells reflect trisomy and others reflect normal complemented chromosomes. This error occurs during the very early cell division stage after fertilization, with some cell groups being formed normally prior to the occurrence of the chromosomal error. Such individuals tend to exhibit mild manifestations of the condition which may reflect the stage of development at which the chromosomal error occurred.

Down's children may be born to older women or to younger women, good women and bad women, active women and passive women. As Stigen points out, "Down's Syndrome does not respect economic status nor does it have any prejudices due to skin color. There seems to be only one point in which all authorities agree, and that is that only women can bear Down's children."

Down's Syndrome Summary:

In terms of Intelligence Quotient scores, the vast majority of DS children fall in the TMI range with an average IQ of 20-30 in institutionalized individuals and 30-40 in noninstitutionalized DS individuals. Only 4% of the DS children measured in 1969 were in the 50-70 range. However, it is important to note that the social development of the DS child remains about two to three years above the level of intellectual functioning. Thus the Down's child scores much higher on

the adaptive behavior scales than one might expect from the traditional IQ scores. The differences between DS children raised in institutions and at home also suggests that there is a strong environmental influence related to the ultimate level of performance that these individuals can achieve.

The DS child is often described as typically happy, cheerful, lovable, and enjoyable. Actually it would appear that the Down's child experiences the same degree of emotions that are characteristic of the child who is in the preoperational stage of normal development as described by Jean Paiget. At the other extreme, DS children have also been stereotyped as being stubborn and obstinate. This stereotyping probably reflects the child's response to the lifestyle or development conditions under which he or she was raised. It might also reflect the degree to which these children are able to develop personality characteristics and behavioral strategies that optimize their ability to cope with the world.

Current research seems to indicate that a person with Down's Syndrome can expect a relatively normal life span. Modern medical care and parents keeping their children at home as opposed to institutional care, have been contributing factors. Parents who care for their child at home have decreased exposure to communicable diseases and therefore increased a child's chance for survival. Many of the physical problems such as abnormalities of the eye, heart, bowel, respiratory system or other handicaps can be cared for in a modern pediatric center.

There is no known cure or treatment for Down's Syndrome. The best control is prevention. It has been suggested the Down's Syndrome can almost be eliminated as a cause of mental retardation through the use of genetic counseling and amniocentesis methods. Male and female carriers of the translocation type can be detected and the probabilities of a DS child estimated. Amniocentesis helps to identify an abnormal fetus. However, the decision to have a therapeutic abortion is the type of personal decision that is dependent upon the moral and religious beliefs of the parents. Parents should be given the full benefit of counseling in arriving at this type of decision. The prognosis for a DS child has vastly improved over the past ten years. Given a good home environment, early systematic training, and adequate health care, the DS child's chances of survival and development of effective life skills are greatly increased.

Cerebral Palsy (CP)

Cerebral Palsy is a group of disabling conditions that is the result of damage to the motor centers of the brain that usually occurred before, during, or shortly after birth. It causes loss, or impairment, of control over voluntary muscles. Some of the events that are thought to cause Cerebral Palsy are: insufficient oxygen to the fetus, Rh incompatibility, certain viruses (for example, German measles) contracted by the mother, premature birth, accidental injury during birth process, lead poisoning, and meningitis. The precise source of the defect is often speculative and after the fact. Parents are best advised to deal with the current condition of their child rather than

devoting time, energy, and efforts to discovering the "why" of their child's disability. It is also common for many mild cases of Cerebral Palsy to go undetected until the child is at or past the walking stage of development. In many cases even severe Cerebral Palsy is not accurately diagnosed until months after the parents have noted that their child is "different."

Since speech involves voluntary motor movement and general motor feedback mechanisms, speech disturbances are very common in CP victims. Current studies of sensory and perceptual development also suggest that the sensory and perceptual deficits often associated with Cerebral Palsy would be present in any child that did not experience normal voluntary motor development and the sensory-motor feedback associated with these activities.

Cerebral Palsy is often associated with mental retardation. It is important to note that CP victims have the entire range of intelligence and that the disability can range from mild (slight unilateral motor deficit) to severe (no apparent voluntary movement). It is rare that young children die from Cerebral Palsy, and in all but the most debilitating cases there will be improvement over the years. Some of the movement and coordination problems can be modified with surgery, some with special prosthetic devices, and some with physical therapy. Recent advances in the early detection of CP and the introduction of special sensory and perceptual stimulation programs have resulted in remarkable performance gains in children. In addition, the application of behavior modification techniques in conjunction with special devices

has resulted in significant improvements in communication as the children develop both receptive and expressive speech capabilities.

As one might expect, any disability that has its origins in early damage to important areas of the brain, disabling conditions other than loss of voluntary muscle control are often present. Depending upon the area of the brain that has been damaged and the degree of involvement of the central nervous system, one or more of the following may also occur in varying degrees: seizures, spasms, mental retardation, abnormal sensation and perception, and impairment of sight, hearing, or speech.

Many of the limitations that are often associated with Cerebral Palsy probably are imposed by society rather than by the disability itself. Cerebral Palsy may have long-term effects on the personality development and the quality of life of the person who has this disability. The handicapped child may be the object of family anxiety and guilt. The physical limitations may result in separation from peers due to the need for special treatment or classes. The inability to communicate effectively often results in "low intelligence" classification and assignment to classrooms and educational programs that reflect this estimate. The facial expressions displayed by the CP victim do not often reflect the cultural stereotype, and the facial distortions associated with speech efforts make them less than attractive to most peers.

Types of Cerebral Palsy:

Cerebral Palsy has been classified in a number of different ways. For the parents of a CP child it is important to learn some of the

terms and vocabulary associated with the classification system used by the medical and professional staff treating their child. By learning the jargon of the system, the parents are more likely to have effective communication with these professional groups, will be able to ask more meaningful questions concerning the treatment and prognosis of their child, and are more likely to elicit detailed explanations of purposes and goals of treatment from the professional.

Because Cerebral Palsy is a complexity of characteristics, causes, and other associated clinical descriptions, it is necessary to put Cerebral Palsy into a number of different perspectives. Before we look at different ways of classifying Cerebral Palsy, a brief summary of what CP is and is not might be helpful. Cerebral Palsy is: (1) related to damage to motor control areas of the brain; (2) non-progressive--it does not get progressively worse as the child grows older; (3) a group of syndromes (or recognized patterns of altered development)--it is not one entity; (4) impaired neurological functioning; (5) manifested by motor and postural disorders; (6) a neuromotor aspect of brain damage; (7) amenable to treatment. However, Cerebral Palsy <u>is not</u>: (1) a disease; (2) curable, (3) terminal. It is rarely a single syndrome. Therefore, as we look at the classification systems, we will get a better idea of the complex array of behavioral symptoms that come under the classification Cerebral Palsy.

The American Academy for Cerebral Palsy has adopted a motor component classification system and gives precedence to this form of classification over all others. Within the motor component classification six different types of Cerebral Palsy emerge: (1) spasticity, (2) athetosis, (3) ataxia, (4) rigidity, (5) tremor, and (6) mixed.

Spasticity:

This form of Cerebral Palsy is the most common. The reported percentage of the total number of cases of Cerebral Palsy ranges from about 48% in a study done in 1965 to 81% in a study done in 1973. On the average most studies report 50-60% of CP victims of the spasticity type. The characteristics of the spasticity Cerebral Palsy include a tendency toward greater muscle involvement and contracture (a fixed condition of muscles affecting the anti-gravity muscles). When stretched passively or actively the anti-gravity muscles, such as the biceps, tend to contract resulting in tense, difficult, and often inaccurate, though voluntary movements. The involvement in the upper extremities may include varying degrees of flexion of the arms and fingers. When the lower extremities are involved, there may be a slithering movement of the legs caused by muscle contractions. In terms of locomotion, there may also be a toe walking type of gait which results from an inwardly rotated foot and from a contraction of the calf muscles. Surgical treatment of tendons often relieves this tendency.

Not all physical characteristics may be present at any given time in any given individual. Symptoms may elude detection in very young children. In fact, as mentioned earlier, the abnormal muscle activity, tone and positioning of the child with spastic type Cerebral Palsy may not become evident until the child fails to reach normal milestones in physical development. A child is recognized as disabled when he or she fails to exercise the natural infant tendency of muscle exploration strengthening in a development of physical independence at the proper age.

Athetosis:

The athetotic form of Cerebral Palsy accounts for the second largest group of CP types. The reported incident ranges from 11-13%, with one survey showing figures of 20-25%. The general description of the physical system of the athetotic CP includes involuntary muscle activity consisting of a wreathing and irregular constant motion. The activity tends to be located in the proximal part of the extremities and face. There is extension and spreading of the fingers, and the head is drawn back with the mouth open and the tongue protruding. The uncontrolled movements are less noticeable when the individual is at rest and disappear during sleep. However, when the individual is under stress or emotional tension, the involuntary motions may become more pronounced. This form of CP is rarely identified in the first year of life. It is only during the second year of life that the fine wandering movements of the fingers, hands, and feet become evident and develop into a typical pattern of athetosis.

Ataxia, Rigid and Tremor Types of CP:

The forms of ataxia, rigidity, and tremor (three other types of Cerebral Palsy) are usually combined for discussion not because of their similarity of characteristics but because of their lack of frequency of occurrence in the total Cerebral Palsy population. It has been estimated that less than 7% of the Cerebral Palsy victims can be classified in these three categories. In fact there are some specialists who would not even use these subcategories and would place these three under the two general types of spasticity and athetosis.

Ataxia: This form of CP is characterized by a lack of coordination and a sense of balance. The disturbance of equilibrium is most conspicuous when the child attempts to walk. The individual may appear to attempt to defy the laws of gravity. In the attempt to locomote, the child frequently falls. One author has described children with ataxia in the following way: "It is as if they were sailors on a rolling ship, feet apart and weaving of the trunk with arms waving to gain balance."

Rigidity: Rigidity occurs infrequently and may in fact be a severe form of the spastic type. The rigid type of Cerebral Palsy is often associated with terms such as the "lead pipe type" or "the cog wheel type" depending on the specificity of the characteristics present in the child. The lead pipe type refers to the constant resistance to movement. It has been compared to the stiffness of a lead pipe. The cog wheel type shares the resistance to movement of the lead pipe, but the resistance lacks consistency. Hence, it may appear more intense at one time and less at others. The primary characteristic of the rigid type of Cerebral Palsy is the high level of muscle tone (hypertonicity) and the almost complete lack of voluntary motion.

Tremor: The tremor form of Cerebral Palsy is best described as the presence of involuntary motion. The motion may vary in its constancy and pattern. The direction and purpose of the movement toward a motor goal is more successful than either of the other types; i.e., the spastic or athetotic form. The general appearance of the tremor is that of shaking or trembling of the limbs.

Mixed types: As you have probably gathered by now, there is not a pure form of Cerebral Palsy; i.e., there is not a single disease entity. However, some children show more general characteristics than others. A study done in 1966 suggested that there are about 3% of the CP population who are of a mixed form; whereas more recent studies in 1976 suggest that anywhere from 15-40% of the children may in fact have mixed types of Cerebral Palsy. As an example of the mixed type, one may find a child who demonstrates both the tenseness of movement of the spastic type and a lack of control associated with the athetotic type. This multiple interference of movement would produce an increased lack of motor volition or planning.

The Floppy Child: This is best described as a special incidence of the presence of atonia in infancy. There is a lack or diminished level of muscle tone as part of the Cerebral Palsy complex. The child with soft, flabby muscles does not always develop Cerebral Palsy. However, it has been reported that the floppy child with the characteristic lack of muscle tone may later develop signs of other types of involvement, including a form of spastic type of Cerebral Palsy.

A topographical classification system of CP: In addition to classifying CP in terms of its motor characteristics, another paradigm considers a more definitive picture of the physical involvement of the individual. A classification that involves the topography or the area of the body where the motor problem is located is an often-used system. This system usually focuses on those aspects of motor control that are most frequently used in such activities as walking or grasping and releasing and other fine and gross motor activities.

The body topography classification include the following:

1) Monoplebia - involvement of one limb.

2) Paraplebia - involvement of the lower limb. This classification is most often associated with the spastic type.

3) Diplegia - involvement of the same parts on both sides of the body, bilateral movement for example.

4) Hemiplegia - involvement on one side of the body. This classification is most often associated with the spastic type.

5) Triplegia - involvement of three limbs, usually both arms and a leg. Although this classification is most often associated with the spastic type, it is not a designation that is often made.

6) Quadriplegia - involvement of all four limbs. Both spastic and athetotic types are included in this classification.

Another form of classification is the degree of involvement. In terms of the description of the functional behavior of the child with Cerebral Palsy you may simply want to categorize in terms of the physical limitations; and therefore simple classifications of mild, moderate, and severe may be sufficient. This classification is most often used in relationship to placing a child in some type of educational system. The following descriptive categories have been suggested:

1) Mild. No treatment is needed. The individual has no speech problem and is able to care for self and can walk without the aid of an appliance.

2) Moderate. Treatment is needed for speech problems and/or difficulties in ambulation and self-care. Braces and/or wheelchairs and other devices and other equipment may be needed.

3) Severe. Treatment is needed but the degree of involvement is at a level where the prognosis for speech, self-care, and ambulation is very poor. New more exotic types of devices may be required if the individual is to communicate and locomote in any fashion.

This particular classification system has certain advantages for parents.

First, this classification system focuses on the determination of the need for some type of treatment in the life and involvement of the individual.

Second, the descriptions assigned to each of the terms deal primarily with a specific kind of activity--ambulation, speech, self-care, etc.

Third, there's an avoidance of the technical aspect of functioning such as strength, range, and motion; but note that the classification system is derived from what the child or individual can do, the actual activities rather than a description based on some abstract measurement or clinical designation.

Associated or secondary disabilities: Cerebral Palsy infrequently occurs as a single diagnostic entity. There are several consequences possible in addition to Cerebral Palsy (motor dysfunction) including disturbances of intellect, mental retardation, speech and/or language problems, sensory losses, and convulsive disorders or behaviors (epilepsy). Some authors estimate that approximately 50% of CP victims are mentally retarded. However, it should be noted that studies have revealed that Cerebral Palsy victims display a full range of intelligence from significantly below the normal range to significantly above the normal range just as that found in the non-palsy population.

To summarize the Cerebral Palsy section: Cerebral Palsy is one of several conditions that may be attributed to brain damage. Damage to the specific motor areas of the brain results in a variety of clinical types of Cerebral Palsy with varying degrees of severity and different areas of body involvement. In addition, Cerebral Palsy may be accompanied by other disabilities including mental retardation, speech impairment, disorders of perception, sensory functioning, and epilepsy. We must take care not to generalize a label such as CP or spastic child in which the person's individuality is lost or denied. The range of characteristics of the disability, the treatment process available, and especially the unique qualities of each individual preclude any reliable generalization. Parents and teachers must first and foremost be concerned with the child as he or she functions and performs for them. A preconceived notion of what the child ought to be able to do and not be able to do makes them blind as to what the child actually can and cannot do.

Epilepsy (Seizure Disorders) (See Appendix I)

The word Epilepsy comes from the Greek word epilambanein, which translated means "to seize." When used medically, epilepsy refers to a group of disorders that are characterized by a tendency for recurrent seizures. Seizures are defined as changes in behavior or activity brought on by an excessive or abnormal electrical discharge of cells in the brain or central nervous system.

The appearance of a singular seizure episode is not conclusive evidence of epilepsy. Seizures can be caused by many different diseases

that affect the central nervous system or by a physical accident to the central nervous system. The seizures that characterize epilepsy are sudden (are not preceded by any unique or special condition that might be seen as causal), are episodic (they occur as a periodic event in on-going behavior), and they are recurrent (they occur from time to time in the life span of the individual). Thus a single or isolated seizure that appears to be the result of some form of severe stress on the organism (e.g., infection, exhaustion, dehydration, high fever, withdrawal from alcohol or other drugs, etc.) may not be diagnosed as epilepsy. For most individuals, the stresses they experience from day to day do not produce abnormal electrical discharges of the brain. Some individuals, on the other hand, may go into seizures as the result of certain forms of stress on the nervous system. If these seizures are recurrent, the condition is called epilepsy (Middelton, et al., 1981).

Mr. Thomas J. Caughlin, Community Services Director, Epilepsy Center of Michigan, has prepared a brief statement for the "Parent Awareness" manual which is reproduced below:

> Epilepsy is a disorder of the central nervous system characterized by seizures from time to time. For most of the two million Americans who are estimated to have epilepsy, seizures are brief and infrequent. For some with the disorder, its consequences are a greater problem than their seizures. Epilepsy can affect anyone, at any age, at any time.
>
> "A little knowledge is dangerous," according to the old saying. Most people have little or no current information concerning the medical and social aspects of epilepsy. "When a parent first learns that his child has epilepsy, at whatever age the definite diagnosis is made, he must respond to the

reality of the situation." But the author added: "few parents are prepared emotionally or intellectually to deal with this sort of news."[1]

During recent years numerous newspaper and magazine articles, booklets and books about the disorder of epilepsy have been published. However, because epilepsy is a name for "many different types of seizures that vary widely in severity, appearance, cause, consequence, and management,"[2] articles and booklets about epilepsy usually contain only general information. And books about the disorder often are not readily available to parents.

The unavailability for specific information is a major problem if you agree that "a large portion of the medical care of a patient with seizures is the patient's or the family responsibility."[3] How can parents become adequately informed and keep informed to handle such responsibility?

First, cooperate wholeheartedly with your child's doctor. Seek and obtain, if possible, from the physician answers about your child's seizures. A famous medical specialist has asked: "If I were suffering from epilepsy, what type of help would I be looking for?" He responded: "I would want to be sure of the diagnosis and the cause. I would like to know the consequences of the condition both now and in the long run. And I would insist on receiving the best treatment available with a minimum of inconvenience."[4] Not all physicians are specialists in epilepsy. Individuals experiencing frequent, or severe, or handicapping seizures should be seen and perhaps be treated by physicians who specialize in epilepsy.

While there are still many unanswerable questions concerning the epileptic seizures of an individual, even for physicians who specialize in epilepsy, there have been many advances made during recent years. To learn about them and to become able to ask pertinent questions about the epilepsy of a loved one, parents should obtain and read a general information booklet such as the 1979 publication, Epilepsy: You and Your Child - A Guide For Parents.[5] The table of contents of that booklet is listed below to introduce you to a range of topics important to persons responsible for a large portion of the medical care of a patient with seizures. Here is what's in A Guide For Parents:

Introduction	Diet
How you feel	Letting go
A mutual concern	Not the only child
What epilepsy is	Relatives are coming
Handling seizures	Frequent seizures
Why my child?	Your child at school
You and the doctor	Telling other people
What medication does	Sources of help
Side effects	Specialized care
Long term effects	Help with other handicaps
Giving medication	Epilepsy reading list

Sources:

1. "Thoughts On Parenting The Child With Epilepsy," a 4-page folder available from Epilepsy Foundation of America, (EFA), 4351 Garden City Drive, Suite 406, Landover, MD 20785. The folder is available without charge to Michigan residents from Epilepsy Center of Michigan, 3800 Woodward, Detroit, MI 48201.

2. Learning About Epilepsy; William B. Svoboda, M.D.; published in 1979 by University Park Press, Baltimore; 240 pp.

3. Nursing Management of Epilepsy; Editors: R.B. Black, B.P. Herman, and J.T. Shope; published in 1982 by Aspen Systems Corp., Rockville; 188 pp.

4. NATIONAL SPOKESMAN, Vol IX, No. 8., a newspaper published by EFA.

5. A 47-page booklet of EFA.

Types of Seizures:

The types of seizures that can occur as the result of an epileptic condition are numerous because the form of the seizure will be determined to a great extent by the area of the brain that is influenced by the abnormal electrical discharge in the central nervous system. The professionals who deal with epilepsy generally use the International Classification of Epileptic Seizures. This classification system is reproduced in Table VI below. The table also includes terms designed to provide more detailed descriptions of the manifestation associated with the particular classification. This information was prepared by the University of Minnesota Comprehensive Epilepsy Program.

TABLE VI

International Classification of Epileptic Seizures:*

I. Partial seizures (seizures beginning at a specific point in the brain).

   A. Partial seizures with minor symptoms (generally without impairment of consciousness).

      1. With motor symptoms (includes Jacksonian seizures): interruption or arrest of speech.

      2. With special sensory or somato-sensory symptoms: person is aware of sensation, usually repetitive.

      3. With autonomic symptoms: rapid heartbeat, flushed face, sweaty.

      4. Compound forms: combination of the above.

   B. Partial seizures with complex symptoms (generally with impairment of consciousness). Temporal lobe or psychomotor seizure.

      1. With impairment of consciousness only.

2. With cognitive symptomatology: conscious amnesia, deja vu (having been or seen before), dreamy states, forced thinking.

3. With affective symptomatology: experiencing feelings unrelated to the environment.

4. With "psychosensory" symptomatology: hallucinations, illusions, objects may appear larger than life.

5. With "psychomotor" symptomatology (automatisms): done automatically, without conscious exercise of the will. Common activities: lip-smacking, chewing, pulling at clothes, walking to a specific place.

6. Compound forms: combination of the above activities.

C. Partial seizures secondarily generalized: all seizures described above may become generalized, sometimes so rapidly that the partial seizure is unobserved.

II. Generalized seizures (begin near the middle of the brain and spread to the cortex at onset).

A. Absence (petit mal): impairment of consciousness only (short blank stare), no warning and no aftereffect.

B. Bilateral massive myoclonus: twitching or jerking of a muscle or group of muscles, usually in face, neck, and upper extremities.

C. Infantile spasms: similar to above, infants only.

D. Clonic seizures: rhythmic jerking.

E. Tonic seizures: rigidity of extremities, arching of back.

F. Tonic-clonic seizures (grand mal): combination of types D and E above. Loss of consciousness, then tonic phase followed by clonic phase.

G. Atonic seizures: very brief without normal tone or tension, often called a drop attack.

H. Akinetic seizures: loss of movement without loss of muscle tone.

III. Unilateral (or predominantly unilateral) seizures: tonic, clonic, or tonic-clonic seizures with or without loss of consciousness. Affects only or predominantly one side of the body.

IV. Unclassified epileptic seizures (seizures which, because of incomplete information, cannot be put in a category).

*Abstracted from H. Gastaut, "Clinical and Electroencephalographical Classification of Epileptic Seizures," Epilepsia 11, (1970): 102-113. The older terms for types of seizures are underlined.

The classification system is based on the current medical understanding of the neural origin of the seizure and the types of symptoms that appear. The system does not describe different types of epilepsy, it deals only with types of seizures. Parents must remember that epilepsy is a condition in which the person may display one or several types of seizures on the same or different occasions. For example, a child who regularly displays absence seizures may occasionally have a tonic-clonic seizure. The classification system is primarily a descriptive tool that provides for a common vocabulary which facilitates more accurate communication concerning seizure disorders. It is important for parents to become familiar with both the new and older vocabularies so that they can communicate more effectively with physicians and other health-care persons concerning the treatment of their child.

The usual clinical manifestations or behavior changes that are associated with the most common types of seizures included in the descriptive classification have been compiled by the Comprehensive Epilepsy Program of the University of Minnesota and are reprinted below. Parents should recognize that these are generalizations. No two children are alike, and no two children who suffer from seizure disorders are alike. These descriptions can help the parents understand a little more about their child's disability.

TABLE VII

Clinical Manifestations of Most Common Types of Seizures:*

A. Complex Partial Seizures (temporal lobe, psychomotor)

1. Location of a complex partial seizure: Usually originates in right or left temporal lobe of the brain.

2. Onset of a complex partial seizure: An aura is the beginning of this particular seizure. Aura can be characterized by a peculiar taste in the mouth, a smell, or a rising feeling of butterflies in the stomach. Sometimes the occurrence of an aura can help a person get to a place of safety.

3. Duration of complex partial seizures: These seizures vary in length from seconds to minutes. The average length of duration is one minute.

4. Common behaviors during a complex partial seizure:

   a. Blank stare.

   b. Person is unresponsive to verbal stimuli. The person generally is unaware of his environment.

   c. Automatisms are part of a complex partial seizure.

      -An automatism can be defined as a repetitive, purposeless activity. It is a non-goal oriented behavior. Some common automatisms are: lip-smacking, chewing movements of the face, picking at clothes, undressing, swallowing, fiddling with hands, wandering around in purposeless manner, rubbing, searching, unintelligible language. These behaviors may be coordinated but inappropriate.

      Some automatisms are conditioned by the immediate environment. For example, if a child were sitting in a classroom at a desk, he may during his seizure, shuffle papers, play with pencils or pens, but not accomplish anything with these behaviors.

   d. Total amnesia during seizure.

5. After a complex partial seizure (postictal period): During the seizure the patient will experience total amnesia. After the seizure, the postictal period, the person with a complex

partial seizure can be mildly to moderately confused. The person often does not realize a seizure has occurred. The person may not be oriented to time and place.

B. Generalized Seizures

1. Location of generalized seizures: Both hemispheres of the brain are affected simultaneously. This can be visualized electrically on the EEG.

2. Types of generalized seizures:

a. Absence seizures are referred to as lapses and usually occur in children. These seizures usually last a few seconds; generally, the child is unaware he's had a seizure.

The hallmarks of this seizure are staring, eyelid flickering, and a lapse of consciousness a few seconds in length. The child is able to resume activity after the seizure is done.

b. Generalized tonic-clonic seizure: The hallmarks of a generalized tonic-clonic seizure are:

1. The person abruptly loses consciousness and posture so the person falls in whatever direction he was leaning at the time.

2. The seizure can begin with a cry or yell. This is not a cry of pain, but due to air rushing out of the lungs past the vocal cords.

3. The body becomes rigid. The back arches. The head is thrown back, the arms are extended, the legs are straight. The person can experience periods of apnea (cessation of breathing).

4. After a varying length of time, alternate periods of spasm and relaxation of muscles start. The person may bite the tongue or pass urine. Breathing is labored or jerky and at times seems to have stopped completely. If this occurs, pale or bluish complexion results.

5. The seizure ends but the person is usually very confused. The person may complain of fatigue or headache, experience difficulty speaking or weakness of an arm or leg, etc. The seizure usually

lasts from one to three minutes. The person passes into deep sleep for varying lengths of time.

*Clinical manifestation, Epilepsy: A Comprehensive Approach for Nurses, Health Sciences Continuing Education, University of Minnesota, Minneapolis, Minnesota 55455.

A simplified chart listing the general types of seizures, general duration of the seizures, the symptoms generally characteristic of the pre-seizure (preictal), during seizure symptoms, and post-seizure, (postictal) symptoms is given in Table VIII below.

TABLE VIII

Type	Duration	Seizure Symptoms	(After Seizure) Postictal Symptoms
Absence (petit mal)	2-15 sec.	Stare Eye fluttering	Amnesia for seizure events No confusion Able to resume activity
Complex Partial (psychomotor, temporal lobe)	1-2 min.	May have aura Staring Automatisms, i.e., lip-smacking picking at clothes fumbling Unaware of environment May wander	Amnesia for seizure events Mild to moderate confusion
Generalized Tonic-Clonic (grand mal)	1-2 min.	A cry Fall Tonicity (rigidity) Clonicity (jerking) May have cyanosis (A bluish coloring of the skin)	Amnesia for seizure events Confusion Deep sleep

TABLE IX

Some Common Anticonvulsant Drugs

Trade Name	Generic Name	Description Code	Seizure Disorder for which usually administered
Tegretol	Carbamazepine	white tablet (Geigy 67)	generalized tonic-clonic partial
Clonopin	Clonazepam	orange tablet (Roche 61)	absence
Zarontin	Ethosuximide	orange capsule (Park Davis 237) syrup	absence
Phenobarbital	Phenobarbital	white tablet red colored elixir	generalized tonic-clonic partial
Dilantin	Phenytoin	white capsule pink band (Park Davis 365) white capsule orange band (Park Davis 362) yellow triangular tablet (Park Davis 007) orange suspension pink suspension	generalized tonic-clonic partial
Mysoline	Primidone	white tablet (Ayerst 430) white tablet (Ayerst 431) suspension	generalized tonic-clonic
Depakene	Sodium valproate	orange capsule (a) cherry syrup	generalized tonic-clonic
Tridione	Trimethadione	white rectangular tablet white capsule solution	absence

In Table IX on page 36, trade name, generic name, general description, and seizure disorder usually targeted for the most common anti-convulsant drugs are listed. This is not intended to be a complete or definitive list of drugs used to treat seizures, just a representative list with which most medical professionals are familiar. Parents should familiarize themselves with the names of the drugs that are prescribed for their children and should request a list of possible effects to be expected from the administration of the drug. Careful observation and recording of specific behaviors and symptoms will provide a baseline against which post-drug administration behaviors and symptoms can be compared.

First Aid:

The Epilepsy Center of Michigan and Abbot Laboratories have published a list of first aid suggestions that are helpful to both the parent of a child with Epilepsy and to the general public when they are faced with a child that is having a generalized (Grand Mal) convulsion.

1) You cannot stop a seizure once it has started. Do not try to revive the person. Let the seizure run its course.

2) Try to prevent the child or adult from striking his/her head or body against any hard, sharp, or hot objects, but do not interfere with the individual's movements.

3) DO NOT FORCE ANYTHING BETWEEN THE PERSON'S TEETH!

4) Place something soft such as a rolled up coat beneath the person's head.

5) Carefully observe the seizure (and if possible record the information) for a later report to medical personnel.

6) When the individual stops jerking, turn the person's face to the side and make sure his or her breathing is not obstructed. Loosen tight clothing.

7) On very rare occasions when an individual seems to pass from one seizure to another without regaining consciousness, call the child's doctor for instructions. (This is called generalized tonic-clonic "status epilepticus" and can be a life-threatening situation. "Status epilepticus" must be stopped as quickly as possible by a physician or in a hospital.

8) Do not be frightened if the person having a seizure stops breathing momentarily.

9) When the child regains consciousness and the seizure ends, help him or her find a place to rest if he or she wishes.

10) Treat the incident in a matter-of-fact manner. Offer reassurance if the seizure has left the child frightened or confused.

For partial complex seizures the procedures are rather similar.

1) Do not attempt to restrain the child.

2) Let the seizure take its course.

3) Remove any potentially harmful objects from the area.

4) Stay with the child until he or she appears capable of resuming normal activity.

5) Offer reassurance if the child appears frightened or remains confused.

Absence (petit mal) seizures do not require any specialized assistance. This type of seizure usually produces only a momentary loss of consciousness and the chances of injury are remote.

Parent's behavior during seizure:

A number of different publications that provide suggestions for parents of children who have Epilepsy stress the importance of the parent as an accurate observer. Most of the articles point out that few parents can ever really become accustomed tothe generalized convulsion

that their child may display. The negative feelings seem to never disappear. However, they do emphasize that the parents can help themselves and their child's therapy program by learning to be accurate and recording observers.

It was mentioned earlier that parents of children with Epilepsy should maintain a record of the dose and frequency of medication. In addition, the parents should observe their child after the introduction of medication in order to be sensitive to the onset of undesirable side effects of the drug, (toxic reactions). Similar recording systems should be used for recording the frequency, duration, and severity of the seizure.

There are three major components of seizure observation: (a) what happened before the seizure? (b) what happened during the seizure? and (c) how did the child behave after the seizure (how long did it take for the child to resume normal activity, etc.)? The rationale for careful observation of the seizure has been summarized by the Minnesota Comprehensive Epilepsy Program. The careful observation and description of the seizure can assist the physician in the diagnosis of the type of seizure syndrome that is involved. With repeated observation, changes in the characteristics of the seizure can be traced and accurately documented in relation to treatment programs. These reports will be very helpful to the physician who is attempting to help the child bring the seizures under control. Finally, the recording (and at times reconstruction with the help of the child) of the events which preceded the seizure may help alert the child to events that may have precipitated the seizure. Another benefit of helping the child reconstruct the

events that preceded the seizure would be to assist her in detecting "Aura" signs or stimuli which would help her to learn to prepare for the onset of the seizure.

In the postictal period the parents should attempt to treat the child in a concerned and reassuring manner. If the parent communicates anxiety over the seizure to the child, he or she may also become anxious and begin to lose self-confidence and the corresponding self-esteem.

Parents should make every effort to learn what Epilepsy is, why seizures happen, how they can help their child, and how they can work to minimize the handicapping aspects of their child's disability. Since recent studies have shown that 60 to 74% of the children who were treated with anticonvulsant drugs early in life became seizure free over a five-year span as young adults, there is every reason for the parents of children with epilepsy to be hopeful and to do everything they can as parents to help prepare their child for a normal life.

Infantile Autism (See Appendix II)

Infantile autism is probably best classified as a severe emotional disorder. A very small portion of children who are clinically classified as psychotic display a set of behaviors which Kanner has summarized and described as Autism. Children who display autism evidence consistent and serious distortions of time, places, and things. They require intensive professional intervention and at times twenty-four-hour supervision. The autistic behavior pattern is described as having the following characteristics:

1) Profound withdrawal from contact with people.

2) Obsessive desire for preservation of sameness.

3) Skillful and even affectionate relationship to objects, not people.

4) Retention of an intelligent and pensive physiognomy and good cognitive potential manifested in those who could speak. Often there is good performance on form and visual tests.

5) Mutism or self-language. Language may be present but does not seem intended to serve as interpersonal communication.

Many researchers have questioned the validity of the distinct unitary autistic syndrome. A number of writers have expanded the definition of autism to include all kinds of children, some of whom have only minimal similarities to those originally described as autistic. The majority of severely handicapped children classified as autistic seem to display a combination of three behaviors. 1) They have little or no speech. 2) They rarely display any affective awareness of people. 3) They maintain a level of activity that has little relation to objects or events in the real world. They engage in repetitive, ritualistic behavior often described as self-stimulation. They may spend hours twirling an object such as an ashtray. Stigen (1978) has described autism as one of the most wrenching disabilities or diagnoses known, and it is probably the least understood. She suggests that any time a mother of the handicapped child is feeling sorry for herself that she should call the mother of an autistic child and ask her how things are going. She lists fourteen signs rather than symptoms that are used in the diagnosis of autism, some of them starting very early in life.

1) The child is not a cuddly baby. (Often the failure of the child to be cuddly is erroneously attributed to the failure of the mother to be an effective parent.)

2) The child acts as if he or she is deaf.

3) There is an over-activity that borderlines on hyperactivity.

4) Fetishisms develop (an obsessive attachment to an inanimate object).

5) The children show little or no eye contact.

6) Persistent spinning of objects.

7) Repetitive or stereotype play.

8) Standoffish manner.

9) Great difficulty of playing and relating to other children.

10) Strong resistance to change of routine.

11) No verbal communication.

12) Harsh, wild, shrill laughter for no reason.

13) Lacks fear of real dangers.

14) Has an enormous resistance to learning.

Five of these symptoms are sufficient for a diagnosis. Basically the autistic child is out of contact with environmental and interpersonal reality. The outlook and prognosis is generally poor; and according to some if there is no communication by five years of age, it is indeed a bad picture. Language is just one facet of communication, and more and more critics are turning to sign language and other forms of communication to establish some form of communication with the autistic child.

The frequency of autism is relatively low. However, because of the bizarre behavior and the difficulty which these children present to the parents and community, they often stand out; and it appears that

the frequency is higher than other less dramatic syndromes. It is estimated that autism has an incidence of about 4 children in every 10,000 births. Although autism can be suspected as early as a few weeks or months after birth, it is usually not until the child is 2 or 2½ years of age when language is not developed, and there is a total social withdrawal that the child is diagnosed and his treatment is initiated. Little is known about the causes, factors, or conditions preceding autism. For a ten-year period between 1958 and 1968 great emphasis was put on the role of early mothering. But the growing body of research suggests that it is probably a biochemical error.

Other developmental disabilities are described as static or improving with age, but autism seems to manifest itself shortly after birth and gets progressively worse in most cases. Thus, for example, a child may appear relatively normal at ten to twelve months of age but at eighteen months of age when homophone speech, (single word utterances) is normally developed, there is a gradual disappearance of noise and any attempts to speak or communicate verbally. Eventually the child becomes mute or develops echolalia. Children in this category often engage in self-destructive or self-abusive behavior. For many years self-destructive behavior was thought to be an integral part of the syndrome, but it does not appear in all of the subjects. However, with the onset of self-destructive behavior and lack of fear for environmental hazards, the child becomes a danger to himself (environmental hazards such as high places, sharp knives, etc.). An autistic child, for example, may simply walk right into a door, or attempt to walk through a glass door, and many times appears to have a very low pain threshold.

Learning Disabilities

The term learning disabilities has been carefully defined by law. The definition in the Education for All Handicapped Children Act PL 94-142, Section 5B (4) defines a specific learning disability as follows:

> A specific learning disability means a disorder in one or more of the basic psychological processes involved in understanding or using language spoken or written which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. The term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps of mental retardation or environmental, cultural, or economic disadvantage.

This concept of learning disability is not synonymous with the child labeled a slow learner nor does it include the child who is perceived as needing remedial training for reading and arithmetic. The definition deals specifically with children who have severe and specific learning disabilities. The definition implies that the learning disabled student will need special education not only because he or she may not learn as quickly as other students but in fact may learn or acquire information in a manner that is different from traditional learning procedures. A quote from Means, 1977: "Special education should involve practices that are unique, uncommon, of unusual quality, and that in particular supplement the organizational and instructional procedures used with the majority of children." The implication here is that traditional methods of teaching and instructing children may not be useful in assisting a learning disabled child to acquire spoken

and written language. It is evident from these definitions that learning disabilities focus on the ability of the child to function in the traditional classroom or school curriculum. Therefore, LD children are usually not identified until they have had contact with some aspect of the American school system. For that reason few parents in our program will have a child that is diagnosed as LD, since learning disabilities are usually not identified until the child is 4½ to 7 years of age.

The learning disabled child has often been referred to as the child with the invisible handicap. The LD child usually appears normal in every respect, physically and mentally, except for the fact that his or her learning difficulties limit normal progress in school. Thus, the diagnosis of a learning disability must consider the chronological age of the child, the grade level being considered, the different or specific academic disabilities, the different modes of learning available to the child, and a potential level underachievement in relationship to intelligence or aptitude test scores.

The present state of the concept of learning disability and services for LD children is well characterized in the definition of learning disabilities described above in PL 94-142. Very few professionals were satisfied with the end results, but they were willing to accept a least restrictive definition. The search for a definition to label a child in order to provide service conflicted with the goal of serving LD children. Every effort to become specific, for example to develop a formula to establish the presence of learning disabilities, was frustrated by the weakness of measurement techniques. Basically the problem has been an attempt to provide a definition which would also

specify the types of services that should be available to the children. Some of the different definitions of learning disabilities are summarized in Table X on page 47. The authors of these definitions and others have the same basic intent--that is to define learning disabilities in such a way as to organize the necessary services.

There are four basic dimensions across these different definitions:

1) There is a discrepancy between the expected performance and the actual performance of the child.

2) Behavioral manifestations are indicated in academic and language areas of strengths and weaknesses in learning.

3) There is an absence of other complications, such as deafness and visual problems.

4) There is a focus or primary explanation for the particular learning problem.

The definitions of LD emphasize and focus on different explanations for learning disabilities. The philosophy of learning disabilities has directed attention to five different sources or causes: developmental problems, neurological dysfunction, psychological processes, language problems, and task-environmental factors.

Certain themes have persisted throughout the brief history of learning disabilities. There was initial emphasis on neurological organization in a neurological definition. Now there is an emergence of a totally different emphasis in the form of definitions following the principles of applied behavioral analysis.

Manifestations of Learning Disabilities:

Most learning disabilities are indicated by disorders of listening, thinking, language, reading, writing, spelling, and arithmetic. The

TABLE X

Dimensions of Learning Disabilities Definitions*

Gallagher (1966, p. 28):

Discrepancy: Children with developmental imbalances are those who reveal a developmental disparity.

Manifestation: None reported.

Focus: In psychological processes related to education of such a degree (often four years or more) as to require the instructional programming of developmental tasks appropriate to the nature and level of the deviant developmental process.

Integrities or exclusions: None reported.

Johnson and Myklebust (1967):

Discrepancy: None reported.

Manifestation: None reported.

Focus: We refer to children as having a psychoneurological learning disability, meaning that behavior has been disturbed as a result of dysfunction of the brain and that the problem is one of altered processes, not of a generalized incapacity to learn.

Integrities or exclusions: None reported.

Kass and Myklebust (1969):

Discrepancy: Children with learning disabilities generally demonstrate a discrepancy between expected and actual achievement.

Manifestation: In one or more areas, such as spoken, reading, or written language, mathematics, and spatial orientation.

Focus: Learning disabilities refers to one or more significant deficits in essential learning processes (perception, integration, and expression, either verbal or nonverbal).

Integrities or exclusions: The learning disability referred to is not primarily the result of sensory, motor, intellectual, or emotional handicap or lack of opportunity to learn.

P.L. 94-142 Section 5 (b) (4) (1975):

Discrepancy: None reported.

Manifestation: Involved in understanding or in using language, spoken or written, which disorder may manifest itself in imperfect ability to listen, think, speak, write, read, spell, or do math calculations. Such disorders include such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

Focus: The term "children with specific learning disabilities" means those children who have a disorder in one or more of the basic psychological processes.

Integrities or exclusions: Such a term does not include children who have learning problems which are primarily the result of visual, hearing, or motor handicaps, of mental retardation, of emotional disturbance, environmental, cultural, or economic disadvantage.

Wepman, et al. (1975, p. 306):

Discrepancy: None reported.

Manifestation: Specific learning disability refers to those children of any age who demonstrate a substantial deficiency in a particular aspect of academic achievement.

Focus: Because of perceptual or perceptual-motor handicaps, regardless of etiology or other contributing factors. The term perceptual as used here relates to those mental (neurological) processes through which the child acquires his basic alphabets of sounds and forms.

Integrities or exclusions: None reported.

State of Washington (Laws of Washington State, 1975):

Discrepancy: Learning/language disability is a performance deficit in one or more of the processes involved in understanding and/or using spoken or written language wherein there exists a measurable discrepancy between academic potential and actual performance.

Manifestation: This performance deficit may manifest itself in impaired ability to attend to task, to conceptualize, to speak or communicate clearly, to read with comprehension, to write legibly and with meaning, to spell accurately, and to perform mathematical calculations, including those involving reading.

Focus: The presence of a learning/language disability in children with near average, average, or above average intelligence is indicated by significant performance deficits in language achievement and/or basic educational skills as measured by norm-referenced standardized testing and/or progressive within-individual assessment methods.

Integrities or exclusions: None reported.

*Wallace, G. and McLoughlin, J.; Learning Disabilities Concepts and Characteristics, Charles E. Merrill Publishing Company, Columbus, 2nd Edition, 1979.

disorders and the lack of achievement of these skills are what draws attention to the child and ultimately provide the basis for recommended remedial programs.

Children with specific learning disabilities are not necessarily underachievers in every area. Both formal and informal test measurements help delineate the specific strengths and weaknesses of the child. Learning disabilities may be manifested within a particular area of achievement, for example reading. It is also necessary to identify the specific deficient skills. In reading such abilities might be the identification of consonant sounds, vowels, and so forth. The same kind of assessment is required in language, arithmetic, and other areas of achievement.

The final level of identification of learning disabilities is usually dependent upon the kind of explanation used for learning disabilities. Basically, the philosophy of the evaluator often affects the type of program that is going to be established for the child. We do not want to get caught in the trap of using the definition of the event as an explanation for the event. Thus, to say a child has minimal brain dysfunction does not tell us what we can do to help the child perform better in school. The definition of a learning

disability as a mere identification of underachievement or lack of learning readiness is not useful to planning an effective remedial program. For example, underachievement may be produced by factors other than a learning disability. For example, lack of motivation on the part of the child and inappropriate educational planning are often causes that must be accounted for in evaluating the potential of the LD child.

Other limiting factors:

LD children are not usually hindered by other handicapping conditions such as visual, hearing, or motor disturbances, emotional disturbances, or environmental disadvantages. It is important to determine that these children can in fact see and hear normally, are not severely deprived of motor ability, and have the benefit of normal home and school environment for learning basic skills. This does not mean that children with other handicaps do not develop school problems as a result of these handicaps. These exclusion clauses have caused considerable controversy in the field of education and have complicated the development of services for LD children.

Focus on causes:

Efforts to pinpoint specific physical or neurological factors causing learning disabilities have not proven very fruitful thus far. Most definitions of learning disability focus upon psychological dysfunction as a precipitating factor involved in the discrepancy between expected and achieved performance. The psychological processes of understanding and using written and spoken language have been primary dimensions used for defining a learning disability. These psychological

processes are generally described as perception, integration, and expression, both verbal and nonverbal. The role of language in learning disabilities has always been a curiosity to professionals. Its exact relationship to and impact upon reading and other disabilities has been receiving increased attention. The newest approach to defining and explaining learning disabilities has been to emphasize the behavioral approach which focuses attention upon not just the child but variables outside of the child such as the task.

TREATMENTS FOR EPILEPSY

Drug therapy is the most common treatment for epilepsy. Drugs are prescribed by physicians according to the weight and age of the person having seizures and the type of seizures that the person is having. The drugs most commonly used are not addicting, however, they do have some side effects. Parents need to stay alert to changes in their son/daughter's physical or emotional condition. Medications may need to be changed after it has been used two or three years. When the body chemistry of a person changes, so does the drug effectiveness. Drug therapy can sometimes be discontinued after a person has been seizure-free for a period of time.

Surgery is used as a method of treatment. This technique has been effective in 50% of the cases it has been initiated on. This is an experimental technique that is only used when medication is not effective in seizure control. Two types of surgery have been tried. One type involves removal of a part of the brain which is causing the uncontroled electrical activity of seizures. A second type of surgery involves cutting the corpus callosum, which is the network of fibers that connect the two sides of the brain. Both types of surgery are considered experimental and are not done on a routine basis.

Ketogenic diets are another form of treatment for persons with epilepsy. The diet must be obtained from and supervised by a physician. The diet is high in fats and low in carbohydrates. Vitamins must be taken along with the diet to insure good health. The diet is a difficult one for most people to stay on. Family doctors can provide more information on the diet.

Two additional treatments which deserve mention are acupuncture and biofeedback. Acupuncture is the ancient Chinese technique of inserting needles into certain spots of the body. It is a technique used for seizure control that is very new to the Western world, and is considered experimental.

Biofeedback involves training a person to monitor their own body. Initial training is done with machines which monitor electrical activity within the brain. The person with epilepsy is taught to find cues within their own body that would indicate a seizure is about to begin. This technique is also in experimental stages.

THEORIES ON CAUSES OF AUTISM

Central nervous system dysfunctioning is seen as a possible cause for autism. This theory states that a part of the brain, located at the base of the head called the reticular activiting system, malfunctions. This part of the brain usually functions to block out irrelevant things in the environment (i.e. ticking of a clock, the hum of motors, etc.). In the autistic child this part of the brain fails to filter out these irrelevant sounds. The person is then bombarded with incoming sounds, smells, and sights. This experience causes an inability to concentrate on important things such as speech and results in the child shuting out everything. The child fails to develop language, and appears deaf. The child resorts to self-stimulating behavior or mutilation in his frustration about his perception of the world. Researchers have found an excess of oxygen in infancy, which may have destroyed the under-developed tissue in the reticular formation causing this problem. Rimland (1964)

Biochemical and metabolic abnormalities are another theory of cause by Kety (1959). His studies pointed to faulty metabolism of epinephrine, a chemical in the brain. A more recent study by Goodwin (1971) found variations in cortisol levels, suggesting a malabsorption and sensitivities to food. The biochemical theories continue to be researched and offer a different viewpoint from the causes that place the blame on parents for the child's maladaptive behaviors.

Success in treating autistic children has been using strict behavior modification techniques combined with using a non-distracting

almost sterile area to conduct lessons. Some use of psychotrophic drugs has also made autistic children more receptive to treatment.

Information obtained from: "Reaching the Autistic Child: A Parent Training Program" by M. Kozloff.

A GLOSSARY FOR DEVELOPMENTAL DISABILITIES

A GLOSSARY FOR DEVELOPMENTAL DISABILITIES

A compilation of:

- terms
- definitions
- cryptic statements
- abbreviations
- references

Organized by the Trombley Infant-Preschool Center Parent group.

Edited and prepared by the Parent Awareness Program, Division of Community Affairs, Delta College.

Supported by MDMH Grant #81630.

CREDITS

The parents of the Bay Arenac area who developed this Glossary would like to acknowledge the following sources:

1. Commonly Used General Special Education Terms were compiled from the material made available from the Macomb County ISD; 4481 Garfield; Mt. Clemens, Michigan 48043 and by the Bay City Public Schools Bus Drivers Transportation Handbill.

2. The Professional Jargon and Cryptic Statements section was compiled as a project group assignment, Ed. 889 F; Parent Teachers Relationships in Special Education, Dr. Keller, MSU, Summer, 1980.

3. The Categorical Areas of Impairment section is from the Bay Arenac ISD Plan for the implementation of PA 198 of 1971.

4. The Life Planning section was originally compiled by the Hasting ISD.

Edited and produced at Delta College under Grant #81630 from the Michigan Department of Mental Health.

DEFINITIONS OF COMMONLY USED GENERAL SPECIAL EDUCATION TERMS

ACHIEVEMENT TEST - A test that measures what a child has achieved academically.

ACTIVITIES OF DAILY LIVING - ADL - All those activities such as feeding and dressing that are necessary for functioning in a family, in school, and in the community.

ADAPTIVE BEHAVIOR - Behavior which has been changed to more appropriately fit a given situation.

AFFECTIVE - Pertains to feelings or emotions.

ANOXIA - Decreased amount of oxygen.

ANTIHISTAMINES - Drugs which are usually prescribed for bronchitis, respiratory infections, and allergies.

ANXIETY - Apprehension, tension, or uneasiness that stems from the anticipation of danger; the source of which is largely unknown or unrecognized.

APHASIA - A weakening or loss of the ability to transmit and/or receive ideas by language in any of its forms (reading, writing, speaking). Not connected with diseases of the vocal chords, eyes, or ears.

APTITUDE TEST - A test which measures someone's capacity, capability, or talent for something.

ATTENTION SPAN - The extent to which a person can selectively focus his attention on things.

AUDIOLOGY - Study of hearing losses.

AUTISM - The state of being autistic is characterized by a withdrawal from reality, a preference for inanimate objects, desire to be alone, being solely concerned with self. The autistic child may possess a good memory and be able to repeat verbatim what another person says. It is possible to "warm" an autistic child by one's affection, but some psychologists believe he possesses his own "key" for return to reality.

There is a dispute among psychologists and others in mental health as to whether autism is organic (inborn) or emotional. The term is often used interchangeably with childhood schizophrenia.

BARBITURATES - A physician may prescribe these drugs to induce sleep or to deaden pain. They are used for the treatment of seizures.

BASAL METABOLISM - The output of energy necessary for minimum vital functioning of the body.

BASAL METABOLISM TEST - One important means of diagnosis of glandular imbalance in which a human's use of oxygen and the production of heat are determined.

BEHAVIOR MODIFICATION - A procedure that is based on the belief that all behavior is learned and therefore can be unlearned (changed). In order to do this one must decide the specific behavior to be changed and decide on a definite plan for accomplishing that goal.

BIRTH INJURIES - Injuries occurring in the organism at birth. The central nervous system is more commonly affected, but bones, joints, and muscles may be involved.

BRAIN DAMAGE - Any structural or chemical defect of the brain. Such damage could occur before, during, or anytime after birth.

BRAIN-INJURED CHILD - (Strauss Syndrome) A child who before, during, or after birth has received injury to or suffered infection of the brain. As a result of such organic impairment there may or may not be defects of the neuro-motor system but this child may show disturbance in perception, thinking, and emotional behavior. These disturbances may occur alone or in combination.

BRAIN SCAN - This procedure is similar to an X-ray. A fluid is injected into a vein. The fluid takes approximately 30 minutes to reach the brain. At this point pictures are taken which enable the doctors to see if there are any diseased tissues such as tumors, etc., present. The fluid leaves the body within 6 hours.

C.N.S. - Central Nervous System.

CENTRAL NERVOUS SYSTEM - The brain and spinal cord make up this mechanism which coordinates and harmonizes the activities of the human body.

CEREBRAL PALSY - A general term used to describe several conditions resulting from injury to the brain, usually before or immediately after birth. It varies widely in degree of severity and body parts affected. There are 3 major types:

1. Spastic - one type characterized by increased muscle tone and exaggerated reflexes.
2. Athetoid - another type characterized by constant succession of involuntary movement.
3. Ataxia - loss of muscular coordination.

CHRONIC - A disease of slow progress and long duration.

CHRONOLOGICAL AGE - Age determined by birthdate.

COGNITIVE - How much one knows.

CONDITIONING - A psychological term referring to a method of programming behavior according to a predetermined plan. Ivan Pavlov is noted for his experiments on conditioning dogs to respond (salivate) to the sound

of a ringing bell. The dog had been repeatedly given food at the same time the bell was rung (conditioning process). Then the ringing of the bell alone brought about the salivation. Human responses can also be conditioned.

CONGENITAL - Refers to conditions existing at birth.

CONVULSION - A seizure in which there is a loss of consciousness and which might involve involuntary tightening of muscles and/or jerking movements of arms and legs.

CONVULSIVE DISORDER - The term is sometimes used interchangeably with seizure disorder and epilepsy. Generally it includes grand mal, petit mal, psychomotor, and Jacksonian seizures. There are many other types among the epilepsies.

CORTEX - The outer layer of the brain.

DEVELOPMENTAL - Successive changes during the process of natural growth.

DIAGNOSTICIAN - See School Psychologist.

DISTRACTIBILITY - An abnormal variation of attention. Inability to fix attention on any one subject for an appropriate amount of time, due to C.N.S. impairment which prohibits necessary monitoring of stimuli.

DOWN'S SYNDROME - See Mongolism.

DYSFUNCTION - Impaired or abnormal functioning.

ECHOLALIA - The repetition of what is said by other people as if echoing them - for example, a child who repeats every word immediately after his mother says it.

EDUCABLE - An educational term to describe the mildest form of retardation. ATso called mildly retarded. Usually the child appears normal until he/she starts school. May learn to read and do other academic work. With proper training, may be expected to work and live independently.

EDUCABLE MENTALLY RETARDED - Mentally retarded children whose retardation ranges from mild to moderate. Usually have I.Q. scores between 50-75. Most of these children can be taught useful reading and number skills and some academic content. Usually will not achieve beyond fourth or fifth grade academically. Capable of integration in society and becoming at least partially self-sustaining.

ELECTROCARDIOGRAM - E.K.G. - A machine known as an electrocardiograph is used. It picks up the small amount of electricity given off by the heart muscle contractions and records them. This enables the doctor to determine if there are any malfunctions in the heart. This is a painless procedure.

ELECTROENCEPHALOGRAM - E.E.G. - The brain cells give off very small amounts of electricity known as brain waves. A painless test taken by a machine

called the electroencephalograph which records the brain waves. This helps doctors to determine which cells are injured and capable of overactivity.

EMOTIONAL DEPRIVATION - When reared in the absence of strong emotional feelings, or attachment, a child will not or cannot express emotion and is said to be emotionally deprived.

ENCEPHALITIS - Inflammation of the brain. There are many types, most of which are due to virus infections and which can damage one or many parts of the brain. It is a frequent cause of learning and behavior disorders because of the resultant brain dysfunctioning.

ENCOPRESIS - Term used for lack of bowel control (also called incontinence) that has continued past the age that control should have been established.

ENDOCRINOLOGIST - A doctor that deals with the science of the endocrine glands, especially in their relation to bodily changes.

ENURESIS - A term used to describe a lack of bladder control commonly called bed wetting, that has continued past the age that control should have been established.

EPILEPSY - A chronic functional nervous disorder, characterized by attacks of unconsciousness or convulsions or both.

ETIOLOGY - Causes of a disease or abnormal condition.

EVALUATION, MEDICAL - Examination and diagnosis by a physician.

EVALUATION, PSYCHOLOGICAL - An assessment to determine the level of functioning through the use of group and/or individual tests. The tests determine the level of functioning in 3 areas.

1. Cognitive - how much one knows.
2. Affective - pertains to feelings or emotions.
3. Perceptual-motor - control, coordination, and appropriate responses from all parts of the body.

Recommendations for treatment, when indicated, are made as a result of the evaluation.

EXCEPTIONAL CHILD - Term refers to a child who is different from the average child. A child showing abnormality either physical or mental could be considered in this category. Sometimes the term "exceptional" is used to designate a child of more than usual ability. May include the handicapped and gifted who deviate from the average to such an extent that they require specialized treatment.

FINE MOTOR - Refers to the control of fine (small) movements such as buttoning a shirt, whistling, cutting with a scissor, etc.

FOCAL SEIZURES - Affects the function of one particular area of the brain.

FUNCTIONALLY RETARDED - Someone who functions as if mentally retarded but is not. This functioning level may be caused by such problems as emotional disturbance, malnutrition, or cultural deprivation.

GENE - The unit in the chromosome that controls the development of characteristics that are passed from parents to offspring. Example - color of eyes.

GENETIC COUNSELING - Assistance in gaining information and/or making decisions concerning the birth of a child who may have certain characteristics affected by the chromosomal pattern of the parents. This information is gained through a study of the family history and chromosomes.

GRAND MAL - Typically, the loss of consciousness, all muscles tightening, usually some jerky movements of legs and arms, the eyes may roll up. Also frothing at the mouth, wetting or soiling themselves, can bite tongue or cheek.

GROSS MOTOR - Refers to coordination of large muscles in a purposeful manner such as bouncing a beach ball, jumping, skipping, etc.

HABILITATION - The act of preparing for a useful life through education, training, or treatment.

HEARING IMPAIRMENT - A sensory-neuro loss resulting in slight to profound hearing loss and learning difficulties. The hearing loss is often associated with language retardation and speech difficulties.

HELLERS' DISEASE - A term used to describe a variety of degenerative brain disorders in children.

HEREDITY - Passing genetically from parent to offspring.

HYDROCEPHALUS - Condition characterized by abnormal accumulation of fluid in skull resulting in enlarged head and prominent forehead. When diagnosed early the enlargement frequently can be halted by surgically inserting a shunt.

HYPERKINETIC - HYPERKINESIS - HYPERACTIVE - Person with abnormally increased mobility and increased motor function and lacking the ability to control it. The child may be constantly in motion, always into things and difficult to restrain.

HYPOACTIVITY - Abnormally diminished motor activity or function.

HYPOGLYCEMIA - A deficiency of sugar in the blood.

IMPULSIVE - Acting without thinking and in an uninhibited way.

INCONTINENT - Having no control over bowel or bladder.

INSTITUTIONS FOR THE MENTALLY RETARDED - Public or private facilities that provide long-term medical treatment, training, and residential care.

INTELLIGENCE QUOTIENT (I.Q.) - A statistic indicating how one's mental ability compares with others of the same age. Approximately three-quarters of the population have I.Q.s between 86 and 115. This statistic can also be expressed in terms of a mental age for children under the age of 16.

INTELLIGENCE TESTS - A standardized test which gives the statistic indicating one's mental ability.

INTERN - Refers to a recent graduate serving an apprenticeship under supervision.

INTERNIST - A doctor who specializes in the branch of medicine which deals with the diagnosis and nonsurgical treatment of diseases.

INTRA-UTERINE - Within the uterus.

JACKSONIAN EPILEPSY - A form of epilepsy characterized by spasms which are usually limited to one side of the body or to one group of muscles.

KINESTHETIC - Pertaining to the sense by which muscular motion, weight, position, space orientation, etc., are perceived.

LABILE - Unpredictable behavior, rapid shifts of mood and emotional expression.

LANGUAGE - Putting sounds together to make words, sentences, etc.

LATERALITY - The tendency, in voluntary motor acts, to use preferentially the organs (hands, feet, ears, eyes) of the same side.

LEARNING DISABLED - A person who has disorders in one or more of the processes involved in understanding or in using spoken or written language, which disorders may manifest themselves in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculation.

LETHARGY - Abnormal drowsiness, marked lack of energy and sluggish behavior. This may be noted as a side-effect of some medication, or an indication of illness.

LONG-TERM WORKSHOPS - A place where individuals, who are unable to meet or sustain the demands of a competitive job market, can be employed. The person may develop the necessary skills to move into the labor market at a future time.

MACROCEPHALY - Excessive size of the head.

MENTAL AGE (MA) - The level of a person's mental ability expressed in terms of norms based on the median mental age of a group of persons having the same chronological age; thus, if a child's mental ability is equal to that of the average nine-year-old, he has a mental age of nine years, regardless of his actual chronological age. In class the teacher should teach on basis of MA, not IQ.

MENTAL RETARDATION - Refers to a level of functioning. The functioning level is said to be subnormal (significantly below normal); it originates during the developmental period (infancy and early childhood). Subnormal functioning is associated with defects in either learning and social adjustment or maturation (natural growth). See also Educable, Mildly Retarded, Moderately Retarded/Impaired, Severely Retarded/Impaired, Trainable Retarded/Impaired, Type A, Type B, Type C.

METABOLISM - A general term referring to the body's assimilation of food, storage, use of energy, and removal of waste.

MICROCEPHALY - Abnormal smallness of the head.

MILDLY MENTALLY RETARDED - See Educable.

MINIMAL BRAIN DYSFUNCTION - This diagnostic category refers to children of average or above general intelligence with learning and/or behavior difficulties ranging from mild to severe, which are due to subtle deviations arising from genetic variations, perinatal brain insults, metabolic imbalances, biochemical irregularities, and/or illness and injuries sustained during the years critical for the development and maturation of those parts of the central nervous system having to do with perception, language, inhibition of impulses and motor control.

MODERATELY RETARDED/IMPAIRED - A mental health term to describe a form of mental retardation. Synonymous with trainable retarded.

MONGOLISM - A condition associated with a chromosomal abnormality.

> Characteristics: Small skull, slightly flattened; short, flat-bridged nose; shortened fingers, with widened space between first and second; upward slant of the eyes; moderate to severe retardation.

MULTIPLE-HANDICAPPED - A child who has two or more disabilities.

NARCOLEPSY - Brief, repeated, uncontrolled periods of sleepiness.

NEONATAL - Refers to that period immediately following birth and through the first month of life.

NERVOUS SYSTEM - The system of nerves and nerve centers including the brain, spinal cord nerves, and ganglia (grey mass of nerve tissue outside the brain and spinal cord).

NEUROLOGICAL EXAMINATION - Tests to determine disease of or damage to the nervous system.

NEUROLOGIST - A doctor who specializes in the diseases of the nerves or nervous system and organic disorders.

NEUROLOGY - The science dealing with the diseases affecting the nerves and the nervous system.

NOCTURNAL ENURESIS - Bed wetting at night.

NYSTAGMUS - An involuntary rapid movement of the eyeball, which may be horizontal, vertical, rotary, or mixed, i.e., of two varieties.

OBSTETRICIAN - A doctor who specializes in childbirth.

OCCUPATIONAL THERAPY (O.T.) - This stage of treatment usually occurs after the acute phase of illness or injury. The concern is in helping the patient develop mental as well as physical well being in all areas of daily life, e.g., self-care, provocational skills. The therapist involves the patient in active participation of the treatment process toward the end of speeding up the recovery and rehabilitation process.

OPTHALMOLOGIST - A doctor who deals with the anatomy, functions, and diseases of the eye.

OPTICIAN - A person who makes or sells glasses in accordance with prescriptions of eye specialists.

OPTOMETRIST - A person trained in the practice of testing the eyes for defects of vision, in order to fit them with glasses.

ORGANIC BRAIN SYNDROME - A specific set of symptoms which indicates physical damage to the brain.

ORTHOPEDICS - A branch of medicine concerned with treatment of diseases and deformities of bones and joints and muscles.

ORTHOPEDIST - A doctor who specializes in the correction or cure of deformity and diseases of the spine, bones, joints, muscles, or any other parts of the skeletal system in persons of any age.

OTOLARYNGOLOGIST - A doctor who specializes in that branch of medicine dealing with ear, nose, and throat.

PATHOLOGY - The scientific study of the nature of disease.

PEDIATRICIAN - A doctor who specializes in the care of children.

PERCEPTION - To know the meaning of that which is experienced by the senses, i.e., seeing, hearing, touching, smelling, tasting.

PERCEPTUAL DISTURBANCES - A characteristic of brain injured children who are attracted to the details of an object rather than the whole object. May occur in visual-perceptual field, tactile field, and auditory field. Requires special educational procedures.

PERSEVERATION - The unusual, uncontrolled persistence of a single act, for example, a child who taps on table top until physically restrained.

PETIT MAL - A form of epilepsy which to the on-looker has the appearance of day dreaming or staring into space for a few moments--sometimes the eyes blink--also, slight jerking of the legs or arms occur during this attack. They are mainly a disorder of the young.

PHYSICAL THERAPY - Treatment of disorders of bones and joints, muscles, and nerves. With the prescription of a physician, the therapist applies treatment to the patient in the form of heat, light, massage, exercise, etc.

POSTNATAL - Occurring after birth.

PRENATAL - Occurring before birth.

PROCTOLOGIST - A doctor who specializes in the branch of medicine dealing with the rectum and anus.

PROGNOSIS - Forecast of the probable course of a disease.

PSYCHIATRIST - A psychiatrist is first of all a medical doctor. He has specialized in psychiatry, a branch of medicine dealing with the disease and pathology of the central nervous system, particularly as it affects individual behavior and personality adjustment. As such, he is, of course, qualified to diagnose, prescribe, and treat medically.

PSYCHOMOTOR - Muscle responses (see Fine Motor and Gross Motor).

PSYCHOMOTOR SEIZURES - An epileptic attack which is characterized by a variety of abnormal behavioral performances with some alteration of consciousness. There may be picking at the clothes, lip-smacking, chewing movements, mumbled speech, purposeless movements of the arms or legs, etc.

PSYCHOTHERAPY - The generic "catch-all" term for any type of treatment that is based primarily upon verbal or nonverbal communication with the patient as distinguished from the use of drugs, surgery, or physical measures.

REHABILITATION - A procedure to restore a person to a condition of good health or useful and constructive activity.

RESIDENT - A medical doctor employed by a hospital while receiving specialized training.

RESIDENTIAL HOME SERVICES - Small public or private facilities that provide primarily a place to live and may also offer programs.

RESPITE CARE - An interval of rest or relief given to a parent by providing care of the child away from the home.

SCHOOL PSYCHOLOGIST - A person trained to give psychological tests, interpret results, and suggest treatment.

SEIZURES - A sudden attack occurring when a group of brain cells become overactive causing disharmony in the brain. This may remain in one area or spread to other areas of the brain--after seizure has ended, harmony is restored among the brain cells.

SENSE TRAINING - Games, exercises, and materials to develop those senses relating to sight, hearing, muscular coordination, taste, touch, and smell.

SENSORY DEPRIVATION - Occurs when a person cannot use (for whatever reason) one or more of the five senses (hearing, seeing, smelling, tasting, touching) or cannot receive through one or more of the senses. Example: being in a soundproof room with no human voices. If not stimulated in early infancy, use of a sense(s) will be underdeveloped.

SEPARATION ANXIETY - Fear and apprehension noted in children when removed from their mothers or other significant persons.

SEVERELY MENTALLY RETARDED/IMPAIRED - An educational term used to describe the most severe form of retardation. May learn activities of daily living to a limited degree. Will always need supervision. As an adult may be eligible for a work activity center.

SHELTERED WORKSHOP - A work-oriented rehabilitation facility for assisting the handicapped individual to progress toward normal living and productive vocational status.

SHUNT - A "tube with a valve," surgically inserted for the purpose of regulating or diverting the flow of spinal fluid or blood in the body, e.g., preventing excessive fluid from surrounding the brain as in hydrocephalus.

SIBLING - A brother or sister.

SIBLING RIVALRY - Competition between children in a family; normally expected to a degree.

SOCIAL HISTORY - The story of the child and his family, facts and feelings.

SOCIAL WORKER - A person trained in insight into human motivation and behavior in the treatment of emotional or social problems.

SPECIAL EDUCATION - Is designed to meet the individual needs of children who deviate from the "normal" or "average" either physically, mentally, socially, or emotionally; to the degree that necessitates different methods, materials, techniques, and equipment in order that he may profit from his educational experiences.

SPEECH - Making sounds associated with communication.

SPEECH PATHOLOGIST OR SPEECH THERAPIST - Persons trained to provide analysis of diagnosis and therapy for speech and language disturbances.

SPINA BIFIDA - Development defect in the bony encasement of the spinal cord.

STANDARDIZED TESTS - Tests constructed to be administered and scored using exacting procedures.

SYNDACTYL - Webbing of fingers and toes.

SYNDROME - Set of symptoms which occur together.

TACTILE - Touch.

TEACHER/CONSULTANT - A teacher who works with handicapped students who are in the regular classroom programs. The T/C may work with the student, his/her teacher, and/or the parent.

THERAPY - Any form of treatment that, hopefully, leads to improvement of the patient or client.

TRAINABLE - An educational term used to describe a person who has potential for self-care, social adjustment, and usefulness within the community. Will always need some form of supervision. As an adult may be able to perform unskilled tasks in the community or work in a sheltered workshop.

TRANQUILIZERS - Drugs which have a calming, quieting effect.

TRANSITIONAL WORKSHOPS - Emphasis on the development of an individual to a higher level of functioning with the primary emphasis being on moving the person toward employment in the regular labor market.

TRAUMA, BIRTH - Physical injury of an infant during his/her delivery.

TRAUMA, PSYCHIC - An experience of a painful emotional character which has a more or less lasting effect on the person and his adjustment.

TREACHER COLLINS SYNDROME - A trait usually not accompanied by mental retardation, but confused with it because of failure to recognize the hearing loss (due to conductive deafness) and because of the facial deformities.

TREMOR - An involuntary trembling or quivering.

TYPE "A" - A term used to denote an educational program for children diagnosed as educable mentally retarded/impaired.

TYPE "B" - A term used to denote an educational program for children diagnosed as trainable mentally retarded/impaired. This term is no longer applicable. Appropriate designation is trainable program.

TYPE "C" - An old term to describe the teacher/consultant program for the mentally retarded.

UROLOGIST - A doctor who specializes in that branch of medicine which deals with the urinary tract (pertains to the containing or secreting of urine) in both men and women and with the genital organs of men.

WORK ACTIVITY CENTER - A program designed exclusively to provide therapeutic activity for handicapped workers whose physical or mental impairment is so severe as to make their productive capacity inconsequential.

WORK ADJUSTMENT WORKSHOP - The evaluation and work adjustment center falls within the scope of a transitional workshop, and must be classified by the type of services they provide.

VISUAL IMPAIRMENT - One whose sight is imperfect.

PROFESSIONAL JARGON AND CRYPTIC STATEMENTS

ABC's - Antecedents, Behaviors, Consequences of behaviors.

ABS - Adaptive Behavior Scale.

ACHIEVEMENT TEST - Any number of tests which measure academic gain in reading, math, science, etc.

ACTUAL ACHIEVEMENT - Academic level at which child is presently functioning.

ADC - Aid to Families with Dependent Children.

AFFECTIVE - Emotional aspects of learning and of a child's development.

ASHA - American Speech and Hearing Association.

ASL - American Sign Language.

ANCILLARY - Refers to staff and/or services that provide evaluation, supplement instruction, or therapy provided as: a) audiological, medical, psychiatric, or psychological evaluation; b) occupational, physical, speech, vocational, or other therapy; c) mobility instruction, teacher consultant service, social work, and services provided by other non-teaching personnel.

ANNUAL REVIEW - Review of child's progress, used to determine following year's placement.

ANOMALY - A marked deviation from the normal standard.

APHASIA - Loss or impairment of the ability to use languages.

AURAL - Pertaining to the ear.

AUTISM - The condition of being dominated by subjective, self-centered trends of thought or behavior at the expense of regulation by objective reality.

B.D. - Birth Date.

BEH - Bureau for Education of the Handicapped.

BEHAVIOR MODIFICATION - A technique of changing behavior based on the theory of operant behavior and conditioning.

BENDER VISUAL-MOTOR GESTALT TEST - A test of visual motor perception development compared with standardized norms.

CA-60 - Individual file for cumulative records of school achievement.

CASE - Council for Administrators of Special Education.

CCBD - Council for Children with Behavioral Disorders.

CCS - Crippled Children's Service.

CEC - Council for Exceptional Children.

CEC-MR - Council for Exceptional Children Division on Mental Retardation.

CEDS - Council for Educational Diagnostic Services.

CENTRAL REGISTRY - A list maintained by the Intermediate School District of all special education students receiving services.

COGNITIVE DOMAIN - The division of human behavior that deals with activities such as thinking, remembering, solving problems, etc.

CONCEPT FORMATION - The way a child discriminates and organizes information.

CONGENITAL - Referring to conditions that are present at birth.

CONVULSION - Pathological, involuntary, and extensive muscular contractions.

db - Decibels.

DCCD - Division for Children with Communication Disorders.

DCLD - Division for Children with Learning Disabilities.

DEC - Division for Early Childhood.

DESIGN TEST - Child is shown a design and asked to copy it.

DISCREPANCY - Differences among academic skills.

DISCRIMINATION - Process of detecting differences either visually or auditorally.

DISFLUENCY - Another term for stuttering.

DISTRACTIBILITY - Tendency for one's attention to be easily drawn to irrelevant stimuli.

DMH - Department of Mental Health.

DOLCH WORDS - A list of most commonly found written words, usually divided into grade levels.

DOWN'S SYNDROME - A condition characterized by a flat skull, oblique eye slit, stubby fingers, and fissured tongue, invariably accompanied by mental deficiency and associated with a chromosomal abnormality that is also referred to as mongolism.

DPH - Division on the Physically Handicapped.

DSS - Department of Social Services.

DURRELL - A comprehensive diagnostic reading test.

DVH - Division of the Visually Handicapped.

DYSCALCULIA - Inability to perform math operations.

DYSGRAPHIA - Inability to write correctly.

DYSLEXIA - Inability to derive meaning from written symbols. A reading dysfunction.

EA - Emergency Assistance.

ECHOLALIA - The automatic involuntary repetition of heard phrases and sentences.

EEG - Electroencephalogram is a graphic record of brain waves obtained when electrodes are placed on the skull or on the exposed brain.

EI - Emotionally Impaired, a person identified by an educational planning and placement committee based on a comprehensive evaluation by a school psychologist and social worker, or a certified psychiatrist as having one or more of the following behavioral characteristics: 1) disruptive to the learning process of other students or himself in the regular classroom over an extended period of time; 2) extreme withdrawal from social interaction in the school environment over an extended period of time; 3) manifestations of symptoms characterized by diagnostic labels such as psychosis, schizophrenia, and autism; 4) disruptive behavior which has resulted in placement in a juvenile detention facility.

EKG - Electrocardiogram is a graphic record tracing of electric current produced by the heart muscle.

EMI - Educable Mentally Impaired, a person identified by an educational planning and placement committee as having all the following behavioral characteristics: 1) development at a rate approximately 2-3 standard deviations below the mean as determined through intellectual assessment; 2) scores approximately within the lowest 6 percentiles on a standardized test in reading and arithmetic; 3) lack of development primarily in the cognitive domain; 4) unsatisfactory academic performance not found to be based on social, economic, or cultural background.

EPILEPSY - The name given to a group of nervous diseases characterized primarily by convulsions.

EPPC - Educational Planning and Placement Committee whose members shall include at a minimum: a representative of the administrative personnel, instructional personnel, diagnostic personnel, and parents. Soon to be called IEPC.

ETIOLOGY - The source or origin of a symptom or disease.

EYE-HAND MOTOR COORDINATION - The ability to coordinate vision with the movements of the body or parts of the body.

FIGURE GROUND - Ability to see objects properly in relation to background.

FROSTIG DEVELOPMENTAL TEST OF VISUAL PERCEPTION - A test for diagnosis and remediation of visual perception problems for ages 4 years through 7 years 11 months.

G and T - Gifted and Talented.

GAIT - Manner or style of walking, running, or moving on foot.

GATES McGINITE - A reading test for grades 1-12 measuring vocabulary, comprehension, and speed and accuracy.

hb - Homebound.

HI - Hearing Impaired, a person identified by an educational planning and placement committee based on an evaluation by an audiologist and otolaryngologist as having a hearing impairment which interferes with learning.

HH - Homebound and Hospitalized.

HH - Hard of Hearing.

hp - Hospitalized.

HYPERACTIVE - Excessive activity.

IEP - Individualized Educational Plan.

IEPC - Individual Educational Plan Committee.

ITPA - Illinois Test of Psycholinguistic Abilities, a test that attempts to measure the input and output of the auditory and visual processing apparatus.

IMPULSIVENESS - Responding without thinking which is often explosive behavior where disorders exist.

INTAKE PROCESS - The social work procedure of interviewing parents and concerned personnel to secure developmental, medical, and social information relative to the referred student.

IQ - Intelligence Quotient, a measure of the relationship of the mental ability of an individual with that of his chronological age group. As commonly used, it gives an indication of a child's expected level of success in school.

ISD - Intermediate School District.

KEY MATH - A diagnostic math test.

KINESTHETIC - The perception of muscular contraction or movement.

LD - Learning Disabled, a person identified by an educational planning and placement committee as having all of the following characteristics: 1) disorder in one or more of the basic psychological processes involved in understanding or using spoken or written language which may manifest itself in an imperfect ability to listen, read, think, speak, write, spell, or do mathematical calculation; 2) manifestation of symptoms characterized by diagnostic labels such as perceptual handicapped, brain injury, minimal brain dysfunction, dyslexia, or aphasia; 3) development of less than expected rate of age group in the cognitive, affective, or psychomotor domains; 4) inability to function in regular education without supportive special education services and 5) unsatisfactory performance not found to be based on social, economic, or cultural background.

LRC - Learning Resource Center, a program designed to provide individual or group assistance for selected students in basic skill areas and instructional enrichment, as applicable.

LONG-TERM OBJECTIVES - Goals for a lengthy period of time. May include more than one school year in planning.

MA - Mental Age.

MACLD - Michigan Association for Children with Learning Disabilities.

MAINSTREAMED - Participation in regular education.

MAEDC - Michigan Association for Emotionally Disturbed Children.

MAT - Metropolitan Achievement Test.

MARC - Michigan Association for Retarded Citizens.

MBD - Minimal Brain Dysfunction.

MCL - Michigan Compiled Laws 1970.

MD - Muscular Dystrophy.

MDE - Michigan Department of Education.

MEA - Michigan Education Association.

MEDICAID - Medical assistance.

MEMORY SPAN - The amount of material that can be comprehended and retained in one presentation.

MI - Mentally Impaired. (See also EMI, TMI, and SMI)

MODALITIES - Pertains to the senses such as sight, smell, hearing, touching.

MONGOLISM - See Down's Syndrome.

MS - Multiple Sclerosis.

MSB - Michigan School for the Blind.

MSD - Michigan School for the Deaf.

MSW - Master of Social Work.

NAD - National Association for the Deaf.

NARC - National Association for Retarded Children.

NEA - National Education Association.

NEUROLOGICAL - Pertaining to the nervous system and the brain.

94-142 (P.L.) - Education for All Handicapped Children Act.

OBJECTIVE - An instructional or learning goal.

OCCUPATIONAL THERAPIST - A person trained to evaluate developmental levels pertaining to fine motor, perceptual motor, and activities of daily living.

198 (P.A.) - Michigan Law for Mandatory Special Education 1971.

OT - Occupational Therapist.

PA - Parents Anonymous.

P.A. 340.1706 - Michigan law defining emotionally impaired.

P.A. 340.1713 - Michigan law defining learning disabled.

PAC - Parent Advisory Committee.

PCT - Physical Confidence Training.

PE - Physical Education.

PERCEPTION - The interpretation of sensory information.

PERFORMANCE IQ - The intelligence quotient as measured by a type of objective examination which involves mainly the manipulation of objects, the mental facilities of awareness and spatial relationships, mental-muscular coordination, visual perception, memory and learning ability.

PERSONALITY INVENTORY - Used to determine information concerning personal and social aspects of a child's world.

PET - Parent Effectiveness Training.

PIAT - Peabody Individual Achievement Test, assesses achievement in reading recognition and comprehension, mathematics, spelling, and general knowledge.

PLACEMENT - The child's educational curriculum.

POHI - Physically and Otherwise Health Impaired, a person identified by an educational planning and placement committee, based upon an evaluation by an orthopedic surgeon, neurologist, pediatrician, or equivalent as having a physical or other health impairment which interferes with learning or requires physical adaptation in the school environment.

PPVT - Peabody Picture Vocabulary Test, a test for receptive vocabulary based on pictures.

PPC - Positive Peer Culture.

PROGNOSIS - A prediction of the outcome of a certain process or activity, especially of a disease but also of a person's academic career, job, success, etc.

PROJECTIVE TEST - A personality test.

PSYCHIATRIST - A physician who has further specialized in that branch of medicine which treats psychological illnesses and the mental aspects of organic diseases.

PSYCHOLOGIST - An individual with a Master's or Doctorate Degree who has specialized in the study of human behavior specifically psychology, that branch of science dealing with behavior, acts, or mental processes, and with the mind, self, or person who behaves or acts or has the mental processes. Within the schools, a school or educational psychologist is one who has studied individual or group behavior as it relates to the typical school setting.

PSYCHOMOTOR DOMAIN - The division of human behavior which deals with neuro-muscular activities.

PT - Physical Therapist, a person to administer exercises and physical training according to medical prescriptions to those with orthopedic, neurological, and/or motor developmental disabilities.

PTA - Parents and Teachers Association.

PTO - Parent-Teacher Organization.

PUBLIC ACT 198 - Michigan law for mandatory Special Education 1971.

PUBLIC LAW 94-142 - Federal law for Education of All Handicapped Children.

REAUDITORIZATION - The ability to recall what was heard.

RECEPTIVE - Understanding incoming stimuli either written or spoken by reading or listening.

REFERRAL - Initiation by a school staff member or concerned individual leading to the investigation by qualified personnel to consider possible special education placement.

RESOURCE ROOM - A special education classroom which students attend on a part-time basis.

REVISUALIZATION - The ability to recall what one has seen.

RIF - Reading is Fundamental.

RR - Resource Room.

SAT - Stanford Achievement Test.

SCHOOL SOCIAL WORKER - Person with a Master's Degree who employs the social work disciplines to assist school personnel with the recognition and management of social and emotional difficulties of students; who counsels students and parents; who makes referrals to mental health resources and who consults with schools to facilitate preventative mental health programs.

SCHOLIOSIS - An appreciative lateral deviation in the normally straight vertical line of the spine.

SELF CONTAINED - A special education classroom which students attend full time.

SHORT-TERM GOALS - Goals which are designed to be achieved in short periods of time leading to the achievement of long term objectives.

SMI - Severely Mentally Impaired, a person identified by an educational planning and placement committee as having all of the following behavioral characteristics: 1) development at a rate approximately 4½ or more standard deviations below the mean as determined through intellectual assessment and 2) lack of development primarily in the cognitive domain.

SOCIAL EMOTIONAL - Used in IEP's to determine goals in improving child's relationships with others.

SOCIALIZATION - The process whereby an individual learns the attitudes, values, and beliefs of the society in which he lives.

SORT - Slosson Oral Reading Test.

SPEC. ED. - Special Education.

SQUIRT - Sustained Quiet Reading Time.

SSI - Supplemental Security Income.

STANFORD-BINET INTELLIGENCE SCALE - An individual intelligence test for ages 2 years through adult.

STIMULI - Something which causes a response.

SUPPORT SERVICES - Any ancillary personnel and the services they provide.

SW - Social Worker.

SYNTAX - The way in which words are put together to form phrases and sentences.

SXI - Severely Multiply Impaired, a person identified by an educational planning and placement committee based on previous medical records as having all of the following behavioral characteristics: 1) severe multiplicity of handicaps in the physical and cognitive domain; 2) inability or expected inability to function within other special education programs which deal with a single handicap; and 3) development of less than the expected rate in cognitive, affective, and psychomotor domains.

TA - Transactional Analysis.

TACTILE - Relates to the sense of touch.

TAG - The Association for the Gifted.

T/C - Teacher Consultant

TED - Teacher Education Division.

TMI - Trainable Mentally Impaired, a person identified by an educational planning and placement committee as having all of the following characteristics: 1) development at a rate approximately 3 to 4½ standard deviations below the mean as determined through intellectual assessment; 2) lack of development primarily in the cognitive domain; and 3) unsatisfactory school performance not found to be based on social, economic, and cultural background.

TRACKING - Ability to follow a moving object with the eyes.

VAKT - Visual, Auditory, Kinesthetic, and Tactile, a word-learning technique.

VERBAL IQ - The intelligence quotient as measured by an objective standardized psychological test, pertaining to that area of mental functioning that relates to the use of words concepts, symbols, and oral and written expression. The verbal IQ is constructed from various test items which purport to measure such things as information, comprehension, memory, attention span, concept formation, and vocabulary.

VI - Visually Impaired, a person identified by an educational planning and placement committee based upon evaluation by an opthalmologist, or equivalent, and other pertinent information as having a visual impairment which interferes with learning and having one or more of the following behavioral characteristics: 1) central visual acuity of 20/70 or less in the better eye after correction, and 2) a peripheral field of vision restricted to no greater than 20 degrees.

VISUAL DISCRIMINATION - Ability to see differences in shapes which are similar.

VISUAL PERCEPTION - The ability of the brain to interpret and understand what your eye is seeing.

WAIS - Weschler Adult Intelligence Scale, an individual intelligence test for ages 16 through adult.

WISC-R - Weschler Intelligence Scale for Children-Revised, an individual intelligence test for ages 5-16 years.

WPPSI - Weschler Pre-School and Primary Scale of Intelligence, an individual intelligence test for ages 4 through 6½ years.

WRAT - Wide Range Achievement Test, an individually administered achievement test assessing reading recognition, spelling, and arithmetic.

WORK STUDY COORDINATOR - A person in the school district who provides work experience for students who have completed an approved vocational educational program. This experience usually takes place during the last year a student is in school.

PROFESSIONAL JARGON AND CRYPTIC STATEMENTS

COMMON TERMS FOR THE EMOTIONALLY IMPAIRED

B.D. - Behaviorally Disordered, used in many states in place of E.I.

BEHAVIOR MOD - Behavior Modification is a treatment designed to reduce behaviors deemed inappropriate. The treatment plan is according to the class and the child.

DAY TREATMENT - Program designed to offer students therapy and education on a daily basis, much more intensive than a regular school program.

E.I. - Emotionally Impaired.

M.A.E.D.C. - Michigan Association for Emotionally Disturbed Children.

M.A.T.E.D.C. - Michigan Association for Teachers of Emotionally Disturbed Children.

P.I.A.T. - Peabody Individual Achievement Test.

RESOURCE ROOM - Classroom designed to have students for a certain amount of hours per day.

S.E.I. - Severely Emotionally Impaired.

SELF-CONTAINED CLASSROOM - Classroom with students being in for a total school day.

VOC ED - Vocational Education.

W.I.S.C. - Weschler Intelligence Scale for Children.

PROFESSIONAL JARGON AND CRYPTIC STATEMENTS

COMMON TERMS FOR THE HEARING IMPAIRED

AC - (See Air Conduction).

AIR CONDUCTION - (AC) The process by which sound is conducted to the inner ear through the air in the outer ear canal as part of the pathway.

AMERICAN SPEECH AND HEARING ASSOCIATION - (ASHA) National professional organization for speech and language pathologists and audiologists.

AMESLAN - American Sign Language.

ARTICULATION - The utterance of the individual speech sounds.

ASHA - (See American Speech and Hearing Association).

AUDIOGRAM - A graph on which hearing tests are recorded.

AUDIOLOGIST - The person who tests hearing and does the rehabilitation of those with hearing impairments.

AUDIOMETER - The machine for measuring hearing or the intensity of sounds.

AURAL - Pertaining to the ear.

BC - (See Bone Conduction).

BONE CONDUCTION - (BC) The process by which sound is conducted to the inner ear through the skull.

db - (See Decibel).

DEAFNESS - The old term used to describe severe or profound hearing loss.

DECIBEL - (db) A unit for measuring the volume (loudness) of sound.

ECHOLALIA - The automatic involuntary repeating of words and sentences. Stage deaf children typically do not develop.

H.I. - Hearing Impaired.

J.N.A.D. - (See Junior National Association of the Deaf).

JUNIOR NATIONAL ASSOCIATION OF THE DEAF - (JNAD) Student group of the National Association of the Deaf.

MICHIGAN SPEECH AND HEARING ASSOCIATION - (MSHA) A statewide professional organization for speech and language pathologists and audiologists.

MIXED HEARING LOSS - A combination of conductive with sensory-neural loss of hearing.

MYRINGOTOMY - A surgical incision made in the eardrum to allow the middle ear to drain.

N.A.D. - (See National Association of the Deaf/NAD). A national organization for parents and professionals concerned with those persons with hearing loss.

O - Right ear.

OTOLARYNGOLOGIST - Treats diseases of the ear, nose, and throat.

OTOLOGIST - A doctor who treats problems of the ears and hearing.

PURE TONE - A continuous sound of only one frequency.

RECRUITMENT - A rapid increase in the sensation of loudness.

SENSORY-NEURAL HEARING LOSS - A hearing loss due to pathology in the inner ear or along the nerve pathway from the inner ear to the brain--inoperable condition.

SOUND FIELD - Sound not coming through a receiver (like headphones or a hearing aid) but rather that which circulates freely.

SPEECH READING - Lip-reading.

SPEECH RECEPTION THRESHOLD (SRT) - The sound level at which a person can repeat 50% of the words given.

SRT - (See Speech Reception Threshold).

THRESHOLD OF PAIN - The point at which sound becomes uncomfortable (120 db) or painful (140 db).

TINNITUS - A ringing or buzzing in the ear.

X - Left ear.

PROFESSIONAL JARGON AND CRYPTIC STATEMENTS

COMMON TERMS FOR THE LEARNING DISABLED

ACTUAL ACHIEVEMENT - Level at which a child is presently functioning.

AFFECTIVE - Emotional aspects of learning and of child's development.

ANNUAL REVIEW - Reviews child's progress (used to determine following year's placement.)

APHASIA - Inability to speak meaningfully.

CENTRAL REGISTRY - A list maintained by the Intermediate School District of all special education students receiving services.

CONCEPT FORMATION - The way a child discriminates and organizes information.

DESIGN TESTS - Child is shown a design and asked to copy it.

DISCREPANCY - Difference among skills.

DISCRIMINATION - Process of detecting differences either visually or auditorally meaning through the eyes or ears.

DISTRACTIBILITY - Tendency for one's attention to be easily drawn to irrelevant stimuli.

DOLCH WORDS - A list of the most commonly found written words, usually divided into grade levels.

DURRELL - A comprehensive diagnostic reading test.

DYSCALCULIA - Inability to perform math operations.

DYSGRAPHIA - Inability to write correctly.

DYSLEXIA - Inability to derive meaning from written symbols. A reading dysfunction.

EXPECTED ACHIEVEMENT - Level of school achievement which child's abilities predict.

EXPRESSIVE - Ability to convey ideas through writing or speaking. Also known as encoding.

EYE-HAND COORDINATION - The way eyes and hands work together.

FIGURE-GROUND PERCEPTION - Ability to see objects properly in relation to background.

HEREDITY - Inherited from parents. Some L.D. tendencies are inherited.

HYPERACTIVE - Excessive activity.

IMPULSIVENESS - Responding without thinking which is often explosive behavior where disorder exists.

INTERMEDIATE SCHOOL DISTRICT - (I.S.D.) Where the special education offices for the county are located.

KEY MATH - A diagnostic mathematics test.

LEARNING DISABILITY - (L.D.) A disorder of the central nervous system which interferes with one or more basic learning functions. A disability may be in collecting information, sorting information, retaining information, or expressing information.

LONG-TERM OBJECTIVE - Goals for a lengthy period of time. May include more than one school year.

MAINSTREAMED - Participation in regular education.

MEMORY SPAN - The amount of material that can be grasped and retained on one presentation.

MODALITIES - Pertains to the senses such as sight, smell, hearing, and touching.

PERCEPTION - The interpretation of sensory information.

PERSONALITY INVENTORY - Used to determine information concerning personal and social aspects of a child's world.

PLACEMENT - Child's educational curriculum.

PROJECTIVE TEST - A personality test using ink blots.

REAUDITORIZATION - Ability to recall what was heard.

RECEPTIVE - Understanding incoming stimuli either written or spoken by reading or listening. Also known as decoding.

REFERRAL - Initiation by a school staff member leading to investigation by a psychologist to consider possible special education placement.

RESOURCE ROOM - A special education room where students attend on a part-time schedule.

REVISUALIZATION - Ability to recall what was seen.

SELF CONTAINED - A special education room where students attend all day.

SHORT-TERM GOALS - Goals which are designed to be achieved in short periods of time leading to the achievement of long-term objectives.

SOCIAL EMOTIONAL - Used in IEP's to determine goals in improving child's relation to others.

SOCIAL WORKER - (S.W.) Provides support services to child, parents, and family members.

STIMULI - Something which causes a response.

SUPPORT SERVICES - Any auxiliary personnel.

TRACKING - Ability to follow a moving object with the eyes.

V.A.K.T. - Word-learning technique which uses visual, auditory, kinesthetic, and tactile modalities.

VISUAL DISCRIMINATION - Ability to tell the difference between shapes which are similar (alike but different).

VISUAL PERCEPTION - Ability of the brain to interpret and understand what the eye is seeing.

WEPMAN - A test of auditory discrimination.

PROFESSIONAL JARGON AND CRYPTIC STATEMENTS

COMMON TERMS FOR THE MENTALLY IMPAIRED

AGE EQUIVALENT SCORE - Conversion of raw score to chronological age.

C.A. - Chronologic Age.

D.D. - Developmental Disability.

DOWN'S SYNDROME - Medical condition caused by extra recessive chromosome, usually results in T.M.I.

E.M.I. - Educable Mentally Impaired.

GRADE EQUIVALENT SCORE - Conversion of raw score to grade level.

I.E.P.C. - Individualized Educational Planning Committee.

I.Q. - Intelligence Quotient.

M.A. - Mental age.

MOTOR AGE - Developmental age of motor skills.

PA 198 - Michigan Mandatory Special Education Law of 1971.

P.A.C. - Parent Advisory Committee.

PL 94-142 - Education for all Handicapped Children Act, 1975.

S.M.I. - Severely Mentally Impaired.

S.M.U.L. - Severely Multiply Impaired.

S.X.I. - Severely Multiply Impaired.

T.M.I. - Trainable Mentally Impaired.

V.R.S. - Vocational Rehabilitation Service.

W.A.I.S. - Weschler Adult Intelligence Scale.

W.I.S.C. - Weschler Intelligence Scale for Children.

W.I.S.C.-R. - Weschler Intelligence Scale for Children - Revised.

W.P.P.S.I. - Weschler Preschool and Primary Scale of Intelligence.

PROFESSIONAL JARGON AND CRYPTIC STATEMENTS

COMMON TERMS FOR THE PHYSICALLY AND OTHERWISE HEALTH IMPAIRED

APHASIA - Loss or impairment of the ability to use language.

APLASIA - Lack of development of an organ or functioning tissue.

ATAXIA - Failure of muscle coordination, irregularity of muscular action.

ATHETOSIS - A condition marked by the ceaseless occurrence of slow, sinuous writhing movements, especially severe in the hands and performed involuntarily.

AURA - A subjective sensation or phenomenon that precedes and marks the onset of an epileptic seizure.

CATALEPSY - A state in which the body and limbs are held muscularly rigid for a considerable period; waxy flexibility, a state in which the limbs maintain the position imparted to them.

CONGENITAL - Referring to conditions that are present at birth.

CONTRACTURES - Failure, temporary or permanent, of a muscle to relax or to return to its former normal length.

CONVULSION - Pathological, involuntary, and extensive muscular contractions.

DIGITS APHASIS - Failure of fingers or toes to develop.

DWARFISM - Underdevelopment of the body; state of being a dwarf.

E.E.G. - Abbreviation for electroencephalogram.

E.K.G. - Abbreviation for electrocardiogram.

ELECTROCARDIOGRAM - (E.K.G.) A graphic record tracing electric current produced by the contraction of the heart muscle.

ELECTROENCEPHALOGRAM - (E.E.G.) A graphic record of brain waves obtained when electrodes are placed on the skull or on the exposed brain.

ENCEPHALOPATHY - Brain disease.

EPILEPSY - The name given to a group of nervous diseases characterized primarily by convulsions. Grand mal, petit mal, and psychomotor are some of the types of epilepsy.

ETIOLOGY - The source or origin of a symptom or disease.

GAIT - Manner or style of walking, running, or moving on foot.

HEMIPLEGIA - Paralysis of one side of the body.

HEREDITY - The transmission from parents to offspring of certain characteristics through genes.

HOMEBOUND/HOSPITALIZED TEACHER - A teacher who tutors physically handicapped or recuperating students who are unable to attend school, either temporarily or permanently.

HYDROCEPHALUS - A condition characterized by abnormal accumulation of fluid within the skull resulting in an enlargement of the head and an underdeveloped or atrophied brain.

HYPERKINETIC - Excessive mobility or motor restlessness.

KINESTHETIC - The perception of muscular contraction or movement.

LESIONS - Changes in tissues due to injury or disease.

NEUROLOGICAL - Pertaining to the nervous system and the brain.

NEUROLOGIST - A physician who specializes in the nervous system.

OCCUPATIONAL THERAPIST - (O.T.) A person trained to evaluate developmental levels of fine motor, perceptual motor, and activities of daily living, plan treatment goals, work with students individually and in groups, and assist teachers in reaching these objectives.

O.T. - (See Occupational Therapist)

PATHOLOGICAL - Abnormal; indicating the presence of disease, structural damage, or major personality deviance.

PHYSICALLY AND OTHERWISE HEALTH IMPAIRED - (POHI) A person identified by an EPPC, based on an evaluation by an orthopedic surgeon, internist, neurologist, pediatrician, or equivalent as well as other important information, as having a physical or other health impairment which interferes with learning or requires physical adaptation in the school environment.

PHYSICAL THERAPIST - (P.T.) A person trained to give exercise and physical training according to medical prescriptions to those with orthopedic, neurological and/or motor developmental disabilities and to assist teachers in attaining these objectives.

P.O.H.I. - (See Physically and Otherwise Health Impaired).

PSYCHOMOTOR SKILLS - Having to do with large and small muscle coordination, directionality, and laterality, spatial relations.

P.T. - (See Physical Therapist).

RIGID, RIGIDITY - Means inflexible, resistant to change, non-adaptable, etc.

SCOLIOSIS - An appreciative lateral deviation in the normally straight vertical line of the spine.

SPINA BIFIDA - A developmental anomaly characterized by a defect in the encasement of the spinal cord with consequent protrusion.

STUPOR - A condition allied to a coma but less severe where the person does not respond to stimuli, shows a loss of orientation and minimum activity.

TONGUE-THRUST - A form of swallowing in which the tongue is usually pressed against or protruded between the teeth.

TRAUMA - Any experience that inflicts serious damage to the body. It is also a term used for psychological damage.

PROFESSIONAL JARGON AND CRYPTIC STATEMENTS

COMMON TERMS FOR THE VISUALLY IMPAIRED

AFB - American Foundation for the Blind.

ALBINISM - A hereditary condition in which there is a lack of pigment throughout the body, including the eyes.

APH - American Printing House for the Blind.

ASTIGMATISM - Blurred vision caused by defective curvature of the refractive surfaces of the eye.

BRAILLE - A system of writing and reading for blind people, the letters being represented by various arrangements of raised points, which may be read by touch.

BRAILLEWRITER - Manually operated six key machine that types braille.

CATARACT - A condition in which the normally transparent lens of the eye becomes cloudy or opaque.

COMPRESSED SPEECH - A device that speeds up recorded materials without changing the pitch.

DAILY LIVING SKILLS - Skills that enhance independence and self worth.

GLAUCOMA - A condition in which pressure of the fluid inside the eye is too high.

HYPEROPIA - A condition in which the eyeball is too short from front to back causing farsightedness.

LEGALLY BLIND - 20/200 visual acuity in the better eye.

LOW VISION - Legally blind but can see somewhat.

MAVIS - Materials Adaptations for Visually Impaired Students.

MOBILITY SKILLS - Skills that enable the blind to move about freely.

MYOPIA - A condition in which the eyeball is too long from front to back, causing nearsightedness.

SPB - National Society for Prevention of Blindness.

FREQUENTLY USED ABBREVIATIONS

C.P. - Cerebral Palsy.

D.D.S. - Doctor of Dentistry.

D. & E. - Diagnosis and Evaluation.

D.O. - Doctor of Osteopathy.

D.S.S. - Department of Social Services.

E.I. - Emotionally Impaired.

E.M.I. - Educable Mentally Impaired.

I.S.D. - Intermediate School District.

K-12 - Kindergarten through twelfth grade.

L.D. - Learning Disabled or Learning Disabilities.

L.P.N. - Licensed Practical Nurse.

M.D. - Doctor of Medicine.

M.R. - Mental Retardation or Mentally Retarded.

M.S.W. - Masters of Social Work.

O.T. - Occupational Therapist.

P.A.C. - Parent Advisory Committee.

P.O.H.I. - Physically and Otherwise Health Impaired.

P.T. - Physical Therapist.

R.N. - Registered Nurse.

Rx - Prescription.

S.S.W. - School Social Worker.

S.X.I. - Severely Multiply Impaired.

T. & A. - Tonsils and Adenoids.

T/C - Teacher Consultant.

T.M.I. - Trainable Mentally Impaired.

V.R.S. - Vocational Rehabilitation Service.

CATEGORICAL AREAS OF IMPAIRMENT

A continuum of special education programs and services is provided to serve those identified as handicapped between the ages of 0 and 25 and in need of such special programs and services in these categorical areas of impairment.

I. Educable Mentally Impaired (E.M.I.)

The youngsters served shall be those designated as: "Educable Mentally Impaired"; i.e., a person identified by an Educational Planning and Placement Committee, based upon a comprehensive psychological evaluation by a school psychologist, certified psychologist or certified consulting psychologist, and other pertinent information, as having all the following behavioral characteristics:

A. Development at a rate approximately two to three standard deviations below the mean or arithmetic average as determined through intellectual assessment.

B. Scores approximately within the lowest six percentiles on an individually administered standardized test in reading and arithmetic.

C. Lack of development primarily in the cognitive domain.

D. Potential social competence.

E. Unsatisfactory academic performance not found to be based on his social, economic, and cultural background.

II. Trainable Mentally Impaired (T.M.I.)

The persons served shall be those designated as "Trainable Mentally Impaired"; i.e., a person identified by an Educational Planning and Placement Committee, based upon a comprehensive evaluation by a school psychologist, certified psychologist or certified consulting psychologist and other pertinent information, as having all the following behavioral characteristics:

A. Development at a rate approximately three to four and one-half standard deviations below the mean as determined through intellectual assessment.

B. Lack of development primarily in the cognitive domain.

C. Unsatisfactory school performance not found to be based on his social, economic, and cultural background.

Service and consultation from the Developmental Disability Services Center established by State Mental Health Services may

be utilized in programming for the Trainable Mentally Impaired infants. The Center provides psychometric service, acts as a referral agency to medical diagnostic and genetic diagnostic services, provides parent education through small study groups and easy-to-comprehend printed materials, and provides parental guidance sessions, home visits, etc. This is expected to tie in closely with the health department and the special education department of the Intermediate School District.

III. Severely Mentally Impaired (S.M.I.)

The persons served shall be designated as "Severely Mentally Impaired"; i.e., a person identified by an Educational Planning and Placement Committee, based upon a comprehensive evaluation by a school psychologist, certified psychologist, or certified consulting psychologist, and other pertinent information, as having all the following behavioral characteristics:

A. Development at a rate approximately four and one-half or more standard deviations below the mean as determined through intellectual assessment.

B. Lack of development primarily in the cognitive domain.

The Bay-Arenac Intermediate School District shall employ a program supervisor who will be responsible for the day-to-day operation of the program. The overall administration of the program shall be the responsibility of the Assistant Superintendent in Charge of Special Education.

IV. Severely Multiply Impaired (S.X.I.)

The persons served shall be those designated as "Severely Multiply Impaired"; i.e., a person identified by an Educational Planning and Placement Committee, based upon a comprehensive evaluation by a school psychologist, certified psychologist, or certified consulting psychologist, and an evaluation by a neurologist, orthopedic surgeon, ophthalmologist, or otolaryngologist and an audiologist, and other pertinent information such as previous medical records and any education history, as having all of the following behavioral characteristics:

A. Severe multiplicity of handicaps in the physical and cognitive domains.

B. Inability or expected inability to function within other special education programs which deal with a single handicap.

C. Development at less than the expected rate of age group in the cognitive, affective, or psychomotor domains.

V. Hearing Impaired (H.I.)

Hearing Impaired means a person identified by an Educational Planning and Placement Committee, based upon an evaluation by an audiologist and otolaryngologist, and other pertinent information as having a hearing impairment which interferes with learning.

VI. Visually Impaired (V.I.)

Visually Impaired means a person identified by an Educational Planning and Placement Committee, based upon an ophthalmologic or optometric evaluation, and other pertinent information as having a visual impairment which interferes with learning and having one or more of the following physical characteristics:

A. Visual acuity of 20/70 or less in the better eye after correction.

B. A field of vision that subtends to an angle no greater than 20 degrees.

VII. Physically and Otherwise Health Impaired (P.O.H.I.)

Persons served shall be designated as "Physically and Otherwise Health Impaired," so identified by the State Code (Rule 9) which reads, "Physically and Otherwise Health Impaired means a person identified by an Educational Planning and Placement Committee, based upon an evaluation by an orthopedic surgeon, internist, neurologist, pediatrician or equivalent, and other pertinent information, as having a physical or other health impairment which interferes with learning or requires physical adaptation in the school environment."

Composition of case/class load will also be commensurate with the State Rule 44.

VIII. Speech and Language Impaired

Speech and Language Impaired means a person certified by a teacher with full approval as a teacher of the speech and language impaired, who has earned a Master's Degree and has completed at least five years of successful teaching of the speech and language impaired, as having one or more of the following speech, oral language and verbal communication impairments which interferes with learning or social adjustment:

A. Articulation which includes omissions, substitutions, or distortions of sound.

B. Voice with inappropriate voice pitch, rate of speaking, loudness or quality of speech.

C. Fluency of speech distinguished by speech interruptions (block), repetition of sounds, words, phrases, or sentences which interfere with effective communication.

D. Inability to comprehend, formulate, and use functional language.

IX. Emotionally Impaired

The students served shall be those designated as "Emotionally Impaired," a person who is identified by an Educational Planning and Placement Committee, based upon a comprehensive evaluation by a school psychologist and a school social worker, a certified psychologist, a certified consulting psychologist, or a certified psychiatrist, and other pertinent information, as having one or more of the following behavioral characteristics:

A. Disruptive to the learning process of other students or himself in the regular classroom over an extended period of time.

B. Extreme withdrawal from social interaction in the school environment over an extended period of time.

C. Manifestation of symptoms characterized by diagnostic labels such as psychosis, schizophrenia, and autism.

D. Disruptive behavior which has resulted in placement in a juvenile detention facility.

X. Learning Disabled

Learning Disabled means a person identified by an Educational Planning and Placement Committee based upon a comprehensive evaluation by a school psychologist, certified psychologist, certified consulting psychologist or an evaluation by a neurologist, or equivalent medical examiner qualified to evaluate neurological dysfunction, and other pertinent information, as having all the following characteristics:

A. Disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language, which disorder may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculation.

B. Manifestation of symptoms characterized by diagnostic labels such as perceptual handicap, brain injury, minimal brain dysfunction, dyslexia, or aphasia.

C. Development at less than the expected rate of age group in the cognitive, affective, or psychomotor domains.

D. Inability to function in regular education without supportive special education services.

E. Unsatisfactory performance not found to be based on social, economic, or cultural background.

JOURNALS

FOR ALL DISABILITIES:

CHILDREN TODAY. U.S. Department of Health, Education, and Welfare, The Office of Human Development, Children's Bureau, Office of Child Development, Washington, D.C. 20201. DHEW Publication, No. (OHD) 76-30014. 6 issues a year/$6.10. (Frequently contains articles about children with handicaps.)

EXCEPTIONAL CHILDREN. Official Journal of The Council for Exceptional Children, 1920 Association Drive, Reston, Virginia 22091. 8 issues a year. $25.00 membership dues to CEC includes subscription to EXCEPTIONAL CHILDREN plus subscription to TEACHING EXCEPTIONAL CHILDREN, published 4 times a year, plus UPDATE, published occasionally.

THE EXCEPTIONAL PARENT. Psy-Ed Corporation, 262 Beacon Street, Boston, Massachusetts 02116. 6 issues a year/$10.00. (Offers a Bookstore Service; parents can order books by mail at a discount.)

SPECIAL CHILDREN. American Association of Special Educators, Box 168, Fryeburg, Maine 04037. 3 issues a year/$10.00.

FOR AUTISM:

JOURNAL OF AUTISM AND CHILDHOOD SCHIZOPHRENIA. Plenum Publishing Corporation, 227 West 17th Street, New York, New York 10011. 4 issues a year/Personal subscription discounted to $17.50 with certification that the subscription is paid for by subscriber for his personal use. (Clearly for professionals, but may interest some parents as well.)

FOR HEARING IMPAIRMENTS:

DEAF AMERICAN. National Association of the Deaf, 814 Thayer Avenue, Silver Spring, Maryland 20910. 11 issues a year/$10.00 individual membership; $15.00/husband and wife; $25.00/family.

THE VOLTA REVIEW. Alexander Graham Bell Association for the Deaf, Inc., 3417 Volta Place, N.W., Washington, D.C. 20007. 9 issues a year/$15.00 with membership.

FOR LEARNING DISABILITIES:

FOCUS ON EXCEPTIONAL CHILDREN--A MONTHLY NEWSLETTER. Love Publishing Co., 6635 East Villanova Place, Denver, Colorado 80222. 9 issues a year/$9.50.

FOR MENTAL RETARDATION:

MENTAL RETARDATION. American Association on Mental Deficiency, 5201 Connecticut Avenue, N.W., Washington, D.C. 20015. 6 issues a year/$22.00.

SHARING OUR CARING. A Journal on Down's Syndrome. P.O. Box 400, Milton, Washington 98354. 5 issues a year/$3.00.

FOR PHYSICAL HANDICAPS:

THE PENNY DROPPER. Spina Bifida Association of the National Capital Area, P.O. Box 4392, Arlington, Virginia 22204. 4 issues a year/$2.00.

PERFORMANCE. President's Committee on Employment of the Handicapped, Washington, D.C. 20210. 12 issues a year/Free.

REHABILITATION LITERATURE. The National Easter Seal Society for Crippled Children and Adults, 2023 West Ogden Avenue, Chicago, Illinois 60612. 12 issues a year/$12.00.

FOR VISUAL HANDICAPS:

NEW OUTLOOK FOR THE BLIND. American Foundation for the Blind, 15 West 16th Street, New York, New York 10011. 10 issues a year/$6.00; two years/$11.00; three years/$16.00. (Clearly for professionals, but may interest some parents as well.)

BIBLIOGRAPHY

Batshaw, Mark L., M.D., and Yvonne M. Perret, Children with Handicaps: A Medical Primer, Paul H. Brookes Publishing Co., Baltimore, 1981.

Best, Gary A., Ph.D., Individuals with Physical Disabilities: An Introduction for Educators, The C.V. Mosby Company, St. Louis, 1978.

Bush, Wilma Jo, and Kenneth W. Waugh, Diagnosing Learning Disabilities, Second Edition, Charles E. Merrill Publishing Company, Columbus, 1976.

Chinn, Philip C., Ed.D., et al., Mental Retardation: A Life Cycle Approach, Second Edition, The C.V. Mosby Company, St. Louis, 1979.

Cross, K. Patricia, Adults as Learners, Jossey-Bass Inc., San Francisco, 1981.

Dempsey, John J., Dr.P.H., The Family and Public Policy: The Issue of the 1980s, Paul H. Brookes Publishing Co., Baltimore, 1981.

Elder, Jerry O., and Phyllis R. Magrab, Coordinating Services to Handicapped Children: A Handbook for Interagency Collaboration, Paul H. Brookes Publishing Co., Baltimore, 1980.

Epilepsy Foundation of America, Epilepsy: You and Your Child, Epilepsy Foundation of America, Washington, D.C., 1979.

Featherstone, Helen, A Difference in the Family: Life with a Disabled Child, Basic Books, Inc., New York, 1980.

Kelly, Leo J., and Glenn A. Vergason, Dictionary of Special Education and Rehabilitation, Love Publishing Company, Denver, 1978.

Kozloff, Martin A., Reaching the Autistic Child: A Parent Training Program, Research Press, Champaign, Illinois, 1973.

Kushner, Harold S., When Bad Things Happen to Good People, Schocken Books, New York, 1981.

Martin, Reed, Educating Handicapped Children: The Legal Mandate, Research Press Company, Champaign, Illinois, 1979.

Sands, Harry, Ph.D., and Frances C. Minters, The Epilepsy Fact Book, F.A. Davis Company, Philadelphia, 1977.

Smith, Judith M. and Donald E. P. Smith, Child Management: A Program for Parents and Teachers, Research Press Company, Champaign, Illinois, 1976.

Stigen, Gail, Heartaches and Handicaps: An Irreverent Survival Manual for Parents, Science and Behavior Books, Inc., Palo Alto, 1976.

CLINICAL ABBREVIATIONS

A - Annual leave

AAMD - American Association on Mental Deficiency

abd. - Abdomen, abdominal

ABL - Anticonvulsant blood levels

ac - Before meals

act. - Active

act. assist. ex. - Active assistive exercise

ad lib - As desired

adm. - Admit, admission, administration

AFB - Acid fast bacillus

$AgNO_3$ - Silver nitrate

AIMS - Abnormal Involuntary Movement Scale

AIS - Alternative Intermediate Services

AK - Akinetic seizure

AM or am - Morning

AMA - Against medical advice, American Medical Association

amt.- Amount

AP - Anteroposterior

APC - Aspirin, phenacetin and caffeine

APF - Acidulated phosphate fluoride

AR - Annual review

ARF - Administrative Report Form

ASA - Aspirin

ASAP - As soon as possible

ASHD - Arteriosclerotic heart disease

asst. - Assisted, assistance

Ax - Axillary

B - Bilateral

BE - Barium enema

bid - twice a day

Bili - Bilirubin

BM - Bowel movement

BP - Blood pressure

BR - Bathroom

BRP - Bathroom privileges

BS - Bowel sounds, breath sounds, blood sugar (nonfasting)

BSP - Behavioral skills profile

BSS - Black silk suture

BUN - Blood urea nitrogen

BX - Biopsy

CA - Carcinoma, cancer, calcium

cap. - capsule

cath. - Catheterize, catheter

CBC - Complete blood count, Continental Bio-Clinical Laboratory Service

cc - Cubic centimeter

CHF - Congestive heart failure

CHO - Carbohydrate

Cl - Chloride

CNS - Central nervous system

c/o - Complains of

cont. - Continued

coord. - Coordination (exercises)

CP - Cerebral palsy

CPK - Creatine phosphokinase

CPR - Cardiopulmonary resuscitation

C & S - Culture and sensitivity

CVA - Cerebral vascular accident

D5S - 5% dextrose in normal saline

D5W - 5% dextrose in water

DAW - Dispense as written

D/C - Discontinue

derm. - Dermatology

diff. - Differential

disc. - Discontinue, discharge

DMH - Department of Mental Health

DO - Doctor of Osteopathy

D.O. - Dental Office

DOA - Dead on arrival

DOB - Date of birth

DPT - Diptheria, pertussis, tetanus

drsg. - Dressing

DSD - Dry sterile dressing

Dx - Diagnosis

DPH - Dilantin

ea. - Each

EC - Enteric coated

EDC - Expected date of confinement

EEG - Electroencephalogram

EENT - Eye, ear, nose, and throat

EKG or ECG - Electrocardiogram

elix. - Elixir

EMG - Electromyography

ENT - Ear, nose, and throat

EOM - Extraocular movements

EPS - Extra pyramidal signs

Equiv. - Equivalent

ER - Emergency room

EUA - Exam under anesthesia

eval. - Evaluation, evaluate

EX - Exercise

EXT - Extremity

exam - Examination

F.A. - First aid

FB - Foreign body

FBS - Fasting blood sugar

Fe - Iron

Fx - Fracture

G - Grand mal seizure

GAS - Global Assessment Scale

GB - Gall bladder

Gc - Gonorrhea

GI - Gastrointestinal

gm. - Gram

GO - General orders

gr. - Grain

GT - Gait training, glucose tolerance

GTA - General training activities

GU - Genitourinary

GYN or gyn - Gynecology

H - Holiday

h. or hr. - Hour

(h) - Hypodermic

HAA - Hepatitis Australia antigen

HAV - Hepatitis A virus

HBcA - Hepatitis B core antigen

HBs (anti) - Hepatitis B surface antibody

HBsAg - Hepatitis B surface antigen

hc - Heel cord

HCP - Health Care Plan

HCT or Hct - Hematocrit

HgA_1c - Glycohemoglobin

Hgb - Hemoglobin

HMC - Hurley Medical Center

H_2O - Water

H_2O_2 - Hydrogen peroxide

H/P - Hot packs, history and physical

HS - Bedtime, hamstring

ht.- Height

Hx - History

I.A.S. - Interdisciplinary Annual Staffing

ICF/MR - Intermediate Care Facility/Mental Retardation

I & D - Incision and drainage

IM - Intramuscular

imp. - Impression

I & O - Intake and output

IPP - Interdisciplinary Program Plan

IQ - Intelligence quotient

ISS - Interdisciplinary Staff Summary

IUD or IUCD - Intrauterine (contraceptive) device

IV - Intravenous

IVP - Intravenous pyelogram, I.V. push

K - Potassium

KO - Keep open

KUB - Kidney, ureter, and bladder

L or Ⓛ - Left

lab. - Laboratory

lac. - Laceration

lap. - Laparotomy

lat. - Lateral

lb. - Pound

LDH - Lactic dehydrogenase

Li, Lith - Lithium level

liq. - Liquid

LLB - Long leg brace

LLE - Left lower extremity

LLL - Left lower lobe

LLQ - Left lower quadrant

LMP - Last menstrual period

LOA - Leave of absence

LPN - Licensed practical nurse

LSS - Light serial seizures

LST - Living Skills Technician

Lt - Left

LUE - Left upper extremity

LUL - Left upper lobe

LUQ - Left upper quadrant

Lytes - Electrolytes (Na, K, Cl, CO_2)

M or Ⓜ - Murmur

MBD - Minimal brain damage

mcg - Microgram

MD - Medical doctor

mg - Milligram

$MgSO_4$ - Magnesium sulfate, epsom salt

MHT - Mental Health Technician

MI - Mentally ill

min. - Minute

misc. - Miscellaneous

ml - Milliliter

mod. - Moderate

MOM - Milk of magnesia

mos. - Months

MR - Mental retardation

MSEA - Michigan State Employees Association

MSEU - Michigan State Employees Union

MYO - Myoclonic seizure

N - Normal, noon, night worked

Na - Sodium

NCME - Network for Continuing Medical Education

neg. - Negative

NG - Nasogastric

NL - Normal limits

NPO - Nothing by mouth

NS - Normal saline

N & V - Nausea and vomiting

NV - Not voiding

NWB - nonweight bearing

O & P - Ova and parasite

O_2 - Oxygen

O - Oral, eye

OD - Right eye

od - Everyday

O.E. - Oral exam

OP - Outpatient

OPD - Outpatient department

ophth. - Ophthalmic

OPSD sheet - Outpatient services data sheet

OR - Operating room

orth. - Orthopedic

os - Mouth, left eye

OT - Occupational therapy

ou - Both eyes

P - Pulse, petit mal seizure, phosphorus

PA - Posterior anterior

P & A - Percussion and auscultation

Pap. - Papanicolaou smear for cervical cancer

path. - Pathology

Pb - Phenobarbital

p.c. - After meals

PD - Program Director

PDR - Physician's Desk Reference

PE - Physical examination

per - by

PERLA - Pupils equal, react to light and accomodation

PID - Pelvic inflammatory disease

PLT - Platelet

PM or pm - Evening

PO or po - Phone order, by mouth

pos. - Positive

post-op. - Postoperative, after surgery

P & R - Pulse and respiration

P/R - Platelet and retic

PRE - Passive resistance exercises

prn - Whenever necessary, if needed

PT, Pro-time - Prothrombin time

PT - Physical therapy

PTT - Partial thromboplastin time

PWB - Partial weight bearing

PS - Psychomotor seizure

Q or q - Every

q.a.m. - Every morning

q.d. - Every day

q.h. - Every hour

qid - Four times a day

q.o.d. - Every other day

q.p.m. - Every evening

QMRP - Qualified Mental Retardation Professional

R or Ⓡ - Right, respirations, regular day off

RA - Rheumatoid arthritis

RBC - Red blood count

RCA - Resident Care Aide

rehab. - Rehabilitation

res. - Resistive

Retic - Reticulocyte count

RIA - Radioimmunoassay

RLE - Right lower extremity

RLL - Right lower lobe

RLQ - Right lower quadrant

RML - Right middle lobe

RN - Registered nurse

ROM - Range of motion

RPH - Registered pharmacist

rt. - Right

RT - Recreational therapy (therapist)

RUE - Right upper extremity

RUL - Right upper lobe

RUQ - Right upper quadrant

Rx - Therapy, drugs, medication, treatment, take, prescription

S - Sick leave

SC - Seizure control

sed. rate - Sedimentation rate

seFe - Serum iron

segs. - Segmented white cells

SGOT - Serum glutamic oxaloacetic transaminase

SGPT - Serum glutamic pyruvic transaminase

sl. - Slight

SLB - Short leg brace

SMA_{25} - Blood Chemistry Profile

SMI - Severely mentally impaired

SNAP - Staffing Needs Assessment Process

SO - Specific objectives

SOAP - Subjective, objective, assessment plans

SOB - Shortness of breath

sol. - Solution

SQ - Social quotient

S & S - Signs and symptoms

SSA - Social Security Administration

SSE - Soap suds (solution) enema

SSI - Supplemental Security Income

STAT - At once

staph. - staphylococcus

strep. - streptococcus

stret. - Stretcher

subq. - Subcutaneous

supp. - Suppository

Sx. - Symptom

syr. - Syrup

St. - Status Epilepticus

T - Temperature

TA - Toothache

T & A - Tonsillectomy and adenoidectomy

tab. - Tablet

TB - Tuberculosis

TBI - Toothbrushing instructions

TD - Tardive dyskinesia

tech. - Technician

temp. - Temperature

tid - Three times a day

TLC - Tender loving care

TM - Tympanic membrane

TPR - Temperature, pulse, and respiration

TR - Treatment room

tsp. - Teaspoon

TT - Tetanus toxoid, tilt table

TUR - Transurethral resection of prostrate

TWE - Tap water enema

Tx - Treatment, transfer

UA or U/A - Urinalysis

UD - Unit dose

UE - Upper extremity

UGI - Upper gastrointestinal

UIR - Unusual incident report

ung. - ointment

URI - Upper respiratory infection

UTI - Urinary tract infection

vag.- Vaginal

VDRL - Venereal disease research laboratory test for syphilis

vit.(s) - Vitamin(s)

VO or V/O - Verbal order

VS - Vital signs

W - White

WBC - White blood count

WC - Wheelchair, white count

wd - Well developed

wf - White female

wk. - Week

wm - White male

wn - Well nourished

WNL - Within normal limits

WP - Whirlpool

wt. - Weight

yrs. - Years

SYMBOLS

- (negative)

+ (positive)

↑ (increased)

↓ (decreased)

1^{o} (primary or first degree)

2^{o} (secondary or second degree)

3^{o} (third degree)

11 bars (parallel bars)

T_3, T_4, T_7 (thyroid function tests)

$\overline{c}$ (with)

$\overline{s}$ (without)

$\overline{ss}$ (one half)

ʒ (dram)

ℨ (ounce--bigger than a dram)

$\dot{\bar{t}}$ (one tablet)

$\ddot{\bar{t}}$ (two tablets)

$\dddot{\bar{t}}$ (three tablets)

gtts (drops)

ERIC Clearinghouse for
Junior Colleges
AUG 15 1986